



Living with the Pathogen: Representations, Aspirations and Practices of Care in Value's Reorganization of Post-Disaster Salento

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ABSTRACT

Almost ten years after the detection of the *Xylella* bacterium in southern Apulia (Saponari, 2013), the landscape now appears almost entirely desiccated, missing an organic vision of the future. The systematic estrangement between the different actors of knowledge and the substantial administrative immobilism has produced today a political, economic and environmental starvation. Our aim is to provide an adequate reading of the stalemate in the descriptive grids proper to the sociological analysis of socio-environmental (De Marchi, 2004) and botanical conflicts (Sheikh and Gray, 2018) which opens up to the social action of the other-than-human world (Puig de la Bellacasa, 2017b; Pyyhtinen, 2016). The material of a double field research - an ethnographic one underway since 2018; and a more recent qualitative sociological research, highlights the role of olive growers, as well as non-profit associations active in reforestation actions, and supports the hypothesis of at least two different interpretive paths. The representations of the crisis adopted by social groups in the infected area, are investigated starting from the definition of conflict issues on the landscape and the economy in terms of aspirational capacity (Appadurai, 2004; De Leonardis, 2012) of local communities, such as to manifest a rupture of identity constructions and social cohesion following an extreme event. Thus, if the ecological disaster succeeded on the one hand in undermining the vulnerability of social groups and their ability to renegotiate their understanding of the disaster and their relationship with non-human actors, the ethnographic research conducted also shows another side. Numerous social entities have allowed a regenerative dimension to emerge from the disaster, characterized by a critical reinterpretation of past agricultural practices and the ability to question conventional boundaries between nature and culture. The challenge of communities not only to build, but to imagine a new landscape, has given rise in Capo Leuca and few but widespread areas of Salento to experimental practices of agroforestry regeneration of the highest social relevance (Papadopoulos 2018), which also interrogate through the commons the economic and political agendas of trade associations and the region on the one hand, and speculators on the other.

KEYWORDS

Xylella;
Salento;
politics of care;
more-than-human
sociology;
re-territorialisation;
habitus;
aspiration;
social sciences;
anthropology



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1. Introduction

Since the beginning of the *Xylella* emergency, in the last months of 2012, the cultural, social, scientific, political and economic narrative on the rapid decline of olive trees in Apulia has unravelled over the years in a conflicting way, with a chain of reactions and counter-reactions that have fostered divergences and polarizations. *Xylella fastidiosa* (xf from now on) is a bacterium included in the EPPO's (European Plant Protection Organization) quarantine organisms (EPPO, 2004), responsible for the desiccation of numerous plant species, including vines, but in its Apulian strain (sbs. *pauca* strain Codiro) it is particularly harmful to the olive tree (Saponari *et al.*, 2013). In Italy it was identified in 2012 following reports from farmers in the area of Alezio and Gallipoli (LE) concerning severe decline in the crowns of trees. Especially in the first phase of the crisis, the declaration of a state of emergency, the most disparate attempts to explain the etiological nature of the epidemic were sustained (not least those of a conspiratorial and denialist matrix), with the genesis of a schismogenetic behaviour (Bateson 1935) among the main social actors (expertise, civic-environmentalist movements, local administrators, the European community) in the construction of the pathology as a complex of causes (CoDiRo) or otherwise as a complex of symptoms (*Xylella*). But the complexity of the reasons contributing to the disease, such as the microbiological and microbiotic status of the soil or the impact of chemical-based agriculture, has consequently triggered a complex reading also of social, historical and ecological issues such as to define the phenomenon of rapid olive tree desiccation as a socio-phytopathology (Colella, 2019). In the light of this premise, the elaboration of this article intends to draw an exploratory overview of the different forms of interpretation and readings that have produced or undermined the capacities of adaptation, recognition and negotiation between collective identity and the landscape (especially with the entities that inhabit it). Within this relationship between interpretation and production of territory, we will attempt to read the navigational and future-building capacities of the local community in relation to the hecatomb of millions of olive trees, trying to reconstruct the dynamics underlying the perception of a new symbolic value of the territory, which includes non-human entities within a perspective of more-than-human worlds (Papadopoulos 2018). The methodology chosen for this mapping (of which this article aims to offer a first substantial characterization) is to be found primarily in the study of practical anticipations and the experience of time offered by the Bourdesian perspective of the relationship between different placements and the stances they generate, in the combination of economic, value and cultural nature (Salento, 2004). We will therefore turn our attention to the community experiences present on the territory that reconfigure through their practices the alliance between humans and non-humans as a relationship of care (as described by Maria Pluig de la Bellacasa), hoping for a re-semanticization of the interconnection between value and economic nature. In conclusion, we will try to show how the inclusiveness of non-humans within the imaginative and aspirational capacity of the territorial realities taken into consideration represents the core of social and local innovation, through the acquisition of evaluative and practical tools for the transformation of a *necro-landscape* (Casid, 2018) into livable *futurescapes* (Adam, 2008).

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On the basis of the same theoretical premises and the evaluation of the territorial context, two analyses are discussed with adjacent but different disciplinary approaches, namely first a strictly sociological overview (outline of a qualitative analysis) followed by an ethnographic one. The aim of this interdisciplinary investigation is to get a picture of the present that can guide a consequent process of re-territorialization that has a symbiotic relationship between the latest perspectives of academic relevance (more-than-human ontologies, human-soil relations and politics of care) and the objective evidence of the territory as it presents itself in its complexity. This is to facilitate bottom-up processes of agro-ecological transition where they already exist, and to assess with caution and attention the possible steps that even the institutional habitus could embrace to undertake a path oriented towards social and local innovation, that also responds to global pressures and epidemic urgencies and climate change (Anthropocene dropped into territorial planning).

2. The infected zone between socio-environmental and botanical conflict

The current condition of the so-called infected area, which covers the entire province of Lecce and a large part of the south of Brindisi and Taranto, today looks like an immense expanse of entirely depleted olive trees: ISTAT data reveals a decrease of 10.000 Ha in olive trees cultivation only between 2019 and 2020 in the territory of Lecce³. If public initiatives (essentially regional) continue to be characterized by a haphazard approach to resolution (e.g. replanting policies, decrees renewing the compulsory use of pesticides in the fight against vector insects, even in areas where desiccation is to be considered chronic and on average irreversible), they are not the only ones to be applied, like those of a private nature which appear as a varied array of attempts, strategies and visions (Bandiera, 2020). This constitutes a complex web of perceptions and representations of the crisis, as well as of the navigational capacities of social groups in orienting futures to aspire to and in anticipating practices in the present. The highly composite and intricate connotation of these placements, and the methodological attempts to weave a connection between the peculiarities of the Salento case and the broader literature related to post-disaster management, inscribes Xylella and post-Xylella issue in Salento within the framework of a socio-environmental (De Marchi, 2004) and botanical (Sheikh, Gray, 2018) conflict, although it is interesting to assess this case as analytically conflictual and not as overt and claimed conflict. First of all, both represent descriptive grids able to provide an adequate reading of all the components of the territorial system that would otherwise escape, as well as a fundamental learning opportunity in the detection of social dynamics, especially in the post-emergency crisis phase in the province of Lecce, offering as a point of observation the relationships between social actors and opening to the prospects of recomposition in terms of management and re-territorialization (Magnaghi, 2013). In the socio-environmental conflict it is above all the territorial dimension that is at stake, understood as the relationship consolidated over time between social groups, environment and landscape and the sharing of rules and values, the frequentation and governance of the territory, the construction of a sense of belonging, historical and social reflexivity, environmental knowledge, local socio-cultural models and socio-economic milieu (De Marchi, 2011). In the context of the Apulian desiccation, the analysis of the socio-environmental conflict allows, first of all, to deploy theories and methodological tools to deepen the contextual reading in the phases before, during and after the Xylella emergency, as well as of the interpretative paths and the forms of representation of the crisis adopted by social groups. Furthermore, and to a greater extent in the infected area of Salento, the field research allows us to detect both the conflictual issues in terms of aspirational capacity (Appadurai, 2004) and the approaches to resolution that are now discussed for the very first time. A qualitative assessment of these can be traced, in terms of agro-ecological

³ dati.istat.it/Index.aspx?QueryId=33706#

alternatives on the one side and agro-industrial implications on the other, - with environmental risks of a monocultural nature once again - as well as an intricate mesh of positions intermediate between these two. Otherwise, the socio-botanical dimension of conflict allows us to enlarge the space of social action to the other-than-human world (Puig de la Bellacasa, 2017b) by problematizing the boundary between the sphere of human agency and that of plant, microbial and bacterial actors. According to this view peculiar to a more-than-human sociological approach (Pyyhtinen, 2016), social construction practices involve not only human living beings, their beliefs and formulations of naturalcultural language, but also mobilize matter - no longer thinkable as inert but living and vibrant - as well as non-human living subjects, at the same level of agency. The pathogen *xf* can be defined (as well as the plant and microbiological world) as a social phyto-actor with a decisive role in the unravelling of socio-environmental conflict, because of its active participation in the transformation of social networks.

3. Why does culture matter after *xf*?

Appadurai defines culture as a necessary dialogue between future aspirations and sedimented traditions (Appadurai 1996, 2004), in which the cultural dimensions pertaining to the past, to memory, need to be taken into account in the symbolic construction of the future, mainly to avoid the repressed tends to reappear unchanged, unlike that which - processed - “allows the future to be planned with responsibility”. (Jedlowski, 2007). The circularity insisting between past and present, a fortiori, can be found in the relationship between present and future and in the imaginative constitution of futurescapes (Adam, 2007). The capacity to aspire, to which Appadurai refers, draws on the future in its symbolic dimension (Mandich, 2012) where aspirations, meaning desires, preferences, choices and plans, are manifested as individual and collective at the same time. They occur in a narrative (tale of the future creation) and cognitive-rational (future exploration) relationship; the future is constructed through social representations, imaginary and definition of temporal horizons of action. This is defined by Mandich as a form of reflexive anticipation of the future or of *future presents* (Adam, 2007): the firm link with the past and memory guides the construction of images of the future in the present. This process is juxtaposed with another one defined as the *present future* where the future is rooted in the present and it is assessed on the basis of the complex system of choices. This factual and non-symbolic dimension does not exclusively require us to think or reflect on the future but to do so by acting in the present and, according to Mandich, that it is reconnected to the Bourdieu’s matrix concept of practical anticipation, as the ordinary experience of concern and immersion in the ‘forth-coming’ (Bourdieu, 1997). From this perspective, practical anticipation is the shape the future takes in relation to the habitus which mediates the relationship between individuals (in this case the social groups of a specific territory) and the different fields they are located in. If, according to the habitus, objective opportunities adjust hopes and the aspiration system, the difficulty of gazing into the future is given - according to Bourdieu - , due to the lack of those objective possibilities that make any specific anticipation of the future possible. And here comes into play the need to consider social representations of post-Xylella crisis not only in descriptive terms but in function of a possible empowerment process. Given the sometimes conflicting diversification that insists on the subjects, the variety of definitions of the present and forms of future narration circulating in Salento draw scenarios not accessible to all in the same way or even obscure horizons or subjects from images of the future (Mandich, 2012). So how and why can the future be discussed in the Xylella-affected Salento? In a context in which scientific research and much of the institutional and public opinion stance still seem to be strongly oriented towards the search for a temporary or definitive solution to the epidemic, like an antidote that will bring everything back, defeat the bacterium and save the olive trees, the history and traditions of the Salento “as it has always been” (future present), we believe it is essential to play in advance and draw an atlas of the future prospects that - increasingly present - approach and build viable ways of reconstructing the landscape on the basis of practical anticipations.

This, believing that - as Gramsci reminds us - moments of crisis facilitate the death of the old but slow down the birth of the new, and it is in this interregnum that highly ambiguous scenarios occur. In the Salento peninsula, where the condition of natural resources has for years shown critical situations essentially due to their clumsy management, where the rural economic system has suffered for over a decade, before the arrival of the bacterium, from a substantial crisis due to abandonment and depopulation, the ambiguous scenarios are represented in our opinion by the possible alternation of phenomena of prolonged inertia, reiteration of monoculture, adherence to a few solutions more subjected than shared (e.g. replanting as the only option). Moreover, the orientation of agro-economic interests that are potentially speculative or oriented towards super-intensive practices (as in the case of the olive trees in Almeria) and the infiltration of forms of financing for agroforestry processes that can be traced back to the global narrative of greenwashing, especially in a border area like Salento, which has always been colonized by physical and cultural extractive and exploitative establishments, from Ilva⁴ to Cerano⁵, not forgetting the not so remote cultivation of tobacco⁴. To connote the future starting from the condition of the present (and the invention of tradition), represents in our opinion a way of accessing the participation of those (farms, cooperatives, third sector associations, landowners and peasants) who in this territory are the object of certain policies or, also, of their effective lack, through a mapping that investigates beforehand the very definition of the situation on which decisions are taken or fled (Berger, 1981). Defining the situation allows us to glimpse the directions actors and social groups are taking in the process of (their own and the territory's) re-cognition. According to our hypotheses, directions and stances occur on the basis of specific spatial, patrimonial, cultural and social location (Bourdieu, 1997). Aspirational capacities in post-xylella Salento arise primarily on a sliding scale of differentiated value attributions in the interaction between rural economy, territory and non-human. If we intend to define futurity as an interactive cultural capacity, in which aspirations - i.e. desires, preferences and planning - become visible again in the study of culture even before economics and are defined as the horizon of expectations and hopes proportionate to possibilities (and Appadurai focuses primarily on a purely economic proportion, "better off you are"), how is this same matrix reproduced in the rural context of Salento? What factors regulate - apart from and in symbiosis with economic possibilities - the range between aspiration and futurity in actors and social groups? What are the knowledge, relationships and experiences that differentiate the navigational capacity, that is to say, the qualitative degree of navigating the complex map of Salento territory in order to give substance to aspirations? Who can someone be able to imagine what, and according to what positioning and criteria, can someone be represented (or have voice)?

4. Positioning, possibilities and local habitus: a first overview

Useful data for this first qualitative analysis emerged from a multiple sampling nature: a number of ten in-depth interviews with farm managers of agricultural enterprises and non-enterprises (Sotte and Arzeni, 2013), selected through reasoned snow-ball-sampling; shared research within 'collettivo epidemia' (an interdisciplinary collective born in Apulia from the interest in Xylella, with active research in anthropology, geography and sociology); field work through membership of the 'Casa delle Agricolture' association and cooperative, which has been operating for a decade in the lower

⁴ Ilva is the most common name to indicate the steel mill inaugurated in 1965 in Taranto, after a huge action of removal of olive trees. It is the largest steel mill in Europe; since the 90s the first reports on the environmental impact and the numerous cases of cancer among the population living in the area emerged.

⁵ ENEL Federico II is a coal-fired thermoelectric power plant with a total installed capacity of 2640 MW. For an in-depth study on the impact of the plant on the health of the local population, see Mangia C., Cervino M., Gianicolo E. A. L., Secondary Particulate Matter Originating from an Industrial Source and Its Impact on Population Health, *International Journal of Environmental Research and Public Health*, 2015, 12(7), 7667-7681, www.mdpi.com/1660-4601/12/7/7667.

Salento region, regenerating abandoned lands through natural agriculture and culturally-based social regeneration processes. Specifically, a clearer and more complex understanding of the positions taken was provided by the activity - carried out since September 2020 - of the preliminary design (still partially underway) of a pilot plan for environmental and socio-economic regeneration in Salento.

In order to orient a reading of what emerged from this universe of subjects, it is necessary to specify some method choices useful for this elaboration: it has been chosen to report in narrative form an overview of the data emerged about the stances on the basis of six main themes, which allow in conclusion to trace a preliminary difference of entrepreneurial habitus. The selected themes are: a) the care of the dried olive tree; b) the care of the soil; c) the evaluation of replanting; d) the definition of regeneration; e) the definition of monoculture; f) the relationship with institutions.

The age of farm managers and their cultural background do not seem to have much relevance in influencing positioning, but rather the size of the UAA (utilised agricultural area) given over to olive cultivation, the productivity, the history and if the agricultural activity constitutes or not the only source of economic supply for the holder's family. The latter mainly matters: in fact it has emerged that the farm manager most easily adopts organic cultivation methods and improves soil and plant care in an agro-ecological perspective, even if with an increase in costs, if there are other incomes not directly related to cultivation activities, both external to the farm or internal, which is the case of multifunctional farms, e.g. agritourism. The resource-based value is the most adopted, where plants and soils are considered in term of productivity; conventional and integrated agriculture (i.e. the action of "pushing production just a bit") is adopted as the main pathway and there are no positions that challenge the use of plant protection products and pesticides with human health, soil and biodiversity. On the contrary, in the non-enterprises, where the range of UAA is really small (from 2 to 5 hectares against the 150 hectares of the larger sample interviewed), a position conflicting with the tradition of a mainly chemical agriculture is preferred, against the imposition of the olive tree as the only identifying element of Salento's agriculture: its value is recognised above all as historical, agronomic and botanical heritage and the quality of the product is strictly evaluated on the basis of soil care and the rejection of chemical agents and herbicides. Given the above, the act of replanting is also evaluated, adopted and - in some cases - perceived as endured, in gradually varying degrees. Where a business approach prevails, we see a schizophrenic process in which, on the one hand, an identity narrative about the uniqueness of the olive tree is carried forward, the perception of it as part of the family, a "dying child", especially if it is centuries-old, while at the same time the decision taken is to invest almost entirely in replanting as the only possible solution to guarantee an economic future.

The case of a specific company is emblematic (but from the researches that will continue it is presumed to find more examples) that has decided to convert the almost entirely disused olive mill activity into a explanting/replanting third-party activity, ensuring a rapid economic recovery by creating a production chain processing the uprooted tree material with grinders and bio-shredders and sending it in large trucks (around 20 per day, says the farm manager) to biomass plants in Calabria and Basilicata. Finally, in the empty land, are re-planted olive trees of the only cultivar resistant to the bacterium, the 'fs17©' known as 'fabulous', or a few other options in semi-intensive farming such as vine, potato and pomegranate. In contrast, in small enterprises where often prevails a holistic vision of agriculture, explanting is not a viable option. Where no attempts to cure have been made, it is preferred to let the plant go, trusting in its intrinsic resilience capacity and in the fundamental role of shelter for biodiversity and ecosystem niche that its roots, in some cases from centuries, possess. It is therefore preferred to cultivate around the olive trees diversifying as much as possible, rediscovering the value of minor varieties of fruit trees, Mediterranean scrub vegetation and high-trunk trees, perceiving agricultural activity as an anthropic and naturalizing action at the same time. Between these two extreme positions there are also intermediate situations, where explanting/replanting is still considered an option together with the experimentation of agroforestry and new crops, both in continuity with a minor tradition and with new possible cultivation alternatives favored by climate change and the adaptation of tropical varieties on the territory.

From this complex mesh of positions derives, consequently, a differentiated reasoning with regard to a definition of regeneration, whereas the economic side and the tradition is considered as it has always been, or where an environmental, ecosystemic and cultural regeneration is also contemplated - together with the economic one - in which that very tradition is problematized and considered as a cause of the crisis. This disparity is evident despite the fact that each of the interviewees uses the concept of monoculture in their representation of the current scenario: on the one hand, this leads us to understand how the crisis caused by the *xf* bacterium has, in the space of a few years, led to a considerable change in the perception of the Salento territory which, if at first it was defined as a olive tree *forest*, is now - in most cases - also evaluated in its monocultural connotation, with the consequent emergence of a new cultural attention for the few remaining wooded and forest areas, which tell another story of Salento. However, the answer to this awareness is expressed on the one side by the need to operate on a system in a complex way, and on the other by implementing cultivation diversifications that remain trapped in monocultural practices of intensive matrix.

In conclusion, what seems to be common to all the interviewees is a substantial critical stance towards the institutions, especially the regional one, for a lack of timing and a lack of reasoned reaction to the epidemic and for the current substantial standstill, both with regard to the conception of an economic recovery strategy and to an integrated plan of environmental and territorial regeneration.

The first number of cooperatives involved during the field research is side by side with non-profit associations, or they are directly offshoots originating from an initial matrix of associationism that often continues to a greater or lesser extent (this is the case of almost all the subjects mentioned around the environmental regeneration project). The positions offered by the agroecology-oriented small businesses analyzed through in-depth interviews are similar to those offered by this kind of cooperatives, so much so that they can be considered under a single habitus.

The identity of Salento's associations, namely those linked to the land and rurality, is connoted by a predominant activist aim, especially related to environmental issues against poisoned agriculture and to the promotion of agro-ecological narratives towards an ecosystemic vision. Often the processes triggered by local associations try to offer a viable alternative to both the resource-based approach, where the economic production takes place at the expense of quality, care and biodiversity conservation, and to the immobility of local institutions in drawing a long-term vision of the landscape. This makes the placement of the associations, and of cooperatives that arise within, prove to be more distinctly oriented towards practices of care and territorial design that also guide economic production, which is not devalued but thought through a vision of a complex system. The crisis caused by the olive epidemic has certainly intensified the nature of this positioning, highlighting a further reflection on how much of this 'territory of the future' should be agricultural and how much should be naturalized⁶, through practices of forestation, re-wilding, ecological corridors, new supply of oxygen.

This reflection opens us to the last great topic we choose to consider in this preliminary analysis, that is agro-forestry or reforestation as an option in the process of territorial regeneration.

Agroforestry - intended as a rational management of crop resources, like fruit trees, tall trees and livestock in combination with each other - and reforestation are even more promoted by different social groups and actors, from associations, to private foundations and public actors; we suppose that, even if the final output could be quite the same, it is possible to identify different positionings and stances related to landscape use and vision, typologies of funding and, above all, specific perceptual semantics of what the territory could be and lived. We named this kind of socio-cultural disposition as territorial habitus. What follows is an first summary description that does not presume to be exhaustive, but in some ways can provide a first substantial mapping of the initiatives oriented towards social and environmental regeneration, where non-profit sector might have quite a

⁶ In this regard, podcast of the IX edition of the Green Night in Castiglione d'Otranto spoti.fi/3gk0yQ5

leading role, especially in relation to the expected relevance and interest of this phenomenon in the future of this territory.

First of all, the stance assumed by the non-profit sector, a direct example of which is offered by the initiative started by five local organizations promoting agroforestry as a development sustainable model in response to the desiccation and social crisis that followed. Almost nine months of co-designing together with the organisations, reveal a shared vision of the territory as a common (De Angelis, 2017), where small and very small communities are involved in a widespread network of care (thus also more-than-human world matters) and where the main issues are reclaiming the access to land, environmental justice and biodiversity preservation, peasant rights and political representations, commoning and social inclusion.

In the so difficult, complex and fragile social and environmental context of Salento, these organisations clearly represent an incredible alternative development model, place-based and common-based, the very agency of change for the local community they are involving, activating new agro-food chains, creating jobs and cultural projects of international importance, becoming subject of many studies (Battaglini *et al.*, 2004; Vacirca and Coppola, 2021). However, the limit of these organisations seems to be a substantial difficulty to make action-based alliances in order to extend their agentivity and impact on a territorial scale (like a regional one), especially because it would require to deal with huge sources of economic fundings, which very often came from big corporations considered greenwashers. Accepting the compromise like an option is still perceived in a conflicting way by the organizations that oscillate between positions internally considered “orthodox” - common-based and bottom-up local processes, with small fundings or crowd-fundings, and “reformist” positions, aimed at obtaining, with the same coherence of vision and the same firmness of method, a more extensive impact and territorial evidence. Complex positions that need more investigations, since above all they problematize the issue of eco-ethical-temporalities of care and patience, and not productivity at all costs - whether it be agricultural practices or the creation of forest as an anthropic product, as well as the timing of urgency and right action, of grasping the signs of change and knowing how to embrace them in one’s own direction.

The second example is provided by the Sylva Foundation, established in the very first months of 2021 within the Tutino Castle, a historical and cultural institution of the Capo di Leuca; in this case, the main objective of the foundation is to create green areas that give relief to the landscape silvered by the dried up olive foliage, financing direct or indirect projects, also linked to cooperatives and associations. The noble and financial matrix (the founders belong to renowned Salento families and bankers) of the foundation leads us to reflect on what possible territorial habitus is grafted to future initiatives, assuming a vision of the territory as a heritage to be protected, a propensity for immediate action - also through funding policies related to carbon tax; more evaluations and measurements are needed to investigate how effectively this hypothesis of vision can also marry initiatives of socio-economic revitalization, or if a merely “aesthetic” reading of the landscape prevails.

Finally, the third example is offered by one of the first public initiatives related to forestation, i.e. the agreement signed between the Municipality of Lecce, SNAM (among the main shareholders of TAP - Trans Adriatic Pipeline, whose construction mobilized one of the strongest environmental and activist battle in recent years) and Arbolia (a benefit company created on the initiative of SNAM and CDP Foundation) for the development of a new green area on the outskirts of Lecce. This last example does not yet tell us much about a possible systemic strategy that public institutions will be able to put in place in the coming months or years, but it certainly gives us the opportunity to compare the ethical variable of this initiative which is a poor match, at least for the moment, with the initiatives carried out by the non-profit sector and its ethical positioning of care.

5. Materializing futures and practices of Care in more-than-human worlds

As we have tried to show in the previous paragraphs, there are different levels on which the futures of the landscape merge with the social milieu of Salento. The forests and the woods, the groves and the orchards, are grasped under different sets of value. As said, these are: the economic-productive relation, the common-good conception of the social movements, and the patrimonial vision, but how do these take into consideration the more-than-human worlds in practice? Beyond the description of the relationships, established under the aim of producing and reproducing certain kinds of value and aspirations, we seek the material entanglement that opens up for the perceptive possibilities of intersubjective projects (De Martino 1961), whereas the subjectivity is not referred merely to the humans, but also the entities inhabiting the landscape (Viveiros De Castro, 2014; Kohn, 2013). A first enlightening ‘historical’ insight is what Antonio, a traditional olive oil miller in Gemini, underlines as matters of ‘soils’ are brought into discussion, in respect to the abuse of chemicals in the last-decades management of Salento’s countryfields. As he was also a retailer for agro-pharmaceutical products, he wasn’t very keen on the perspective of selling ‘mass destruction weapons’ to anyone. The reasons behind this feeling constitute, in our view, a kind of perception of the material becoming inside a pattern of reciprocities (Milazzo, 2019). So the story unfolds:

«Once, a guy comes and asks me for a bottle of Rogor... “you know”, he says to me, “because in the summer the cockroaches come out”. Well, at that time there was no cesspool. Everything went into the water table. “I don’t think you realize what you’re doing?” I shouted at him. “If you don’t respect others, at least respect yourself and your family.” Because the pit is connected to the drains, and at certain times the drains empty and the stench comes out, “don’t you want to find yourselves dead in your house? Do you know how much I get for selling a Rogor? 800 liras. Do you think my conscience is worth 800 liras?” With a bottle like that you could exterminate a country». (Gemini, LE, 18/07/2018)

Antonio is exacerbating something that was widely diffused in Salento, that is the radical simplification (Haraway and Tsing, 2019) that the spread of pesticides brought into the practices of agricultural care. The easiness embodied by the casual client that made Antonio angry, exemplifies the loss of the awareness towards the historical role of soils and the work spent in centuries for creating that very same productive soil that the pesticides have been eroding in the last few decades. The point at stake, as anticipated, regarded the becoming-material of human-landscape relationship through soils, under the lenses of ‘production’ at least in two respects: the first being in the economic sense, as the landscape was constituted mainly by olive trees intended for economic exploitation. Secondly, we were discussing the earthy production of soils, that in Salento was a process that took centuries to unfold. The lands full of rocks had to undergo a monstrous work of stoning, but in order to be cultivated, another step was required, that Antonio explains in the following of the conversation:

«Before, the kids were careful because their parents instructed them on this, when the donkeys, horses, cows and oxen passed by, they went to the countryside to plow, they went to collect manure from the roads. As soon as the horse was passing by, immediately they ran, how precious it was. More precious than bread was the manure. Then all the organic matter... or even before... I’m saying things that are also disgusting, but there was no sewer, no drains... in the bathroom you went in a ‘buccichiattolo’ [a little hole in the pavement]. I remember my father went early in the morning in the pit with my mother, and with the hoe removed all this manure and took it to the country and, oh! I mean who knew of the existence of chemical fertilizers?» (Gemini, LE, 5/03/2021)

The human capacity for economic production, thus, is historically encompassed in the work of the farmers, as outlined by the poet Tommaso Fiore: ‘I think that this - the tiring up of the stone-ground - masterwork would have frightened a giant’s people [...]. And it didn’t take less than the laboriousness of a people of ants’. The ‘ants-like’ work of the ancient people, just like that of the very insects and tiny micro-organisms in the soil, slowly materialized the land where, until a few years ago, thousands of productive olive trees stood (Bandiera and Milazzo, forthcoming).

Yet, the sense of interconnectedness erupts not only from the orchestral work of the alliance between microorganisms and men in the biological processes of organic materialization of the soils (Ingham, 2002), but also from the aftermath of the transformation of agricultural practices since the introduction of uncontrolled chemicals:

«I mean... this was... look in these 30-40 years, the first glyphosate was called ‘Serenio’ [Fair]... It was glyphosate at 10% percent... Very little, think of the nowadays glyphosate: the Round Up is 45%. Gradually the plants did not dry anymore and had to increase the percentage... and sometimes it does not even work anymore... Since then, nothing has been understood, if the farmer comes to the hoe, you give him the tiller, then the tractor, then the herbicide, he says “fuck, it takes me a week to make 100 m², with this I can make a hectare in 10 minutes”, and I remember that everything dried with 10%, now we are at 45%... there are plants that have become so unassailable that you have to change the active ingredient... This is a contributing cause of desiccation of the olive trees». (Gemini, LE, 18/07/2018)

As Antonio described above, interconnectedness stems out also as a scaling process of inurement of practices. Whether we inscribe Antonio’s experience in the pattern of enterprises affected from the olive trees’ depletion, or inside the group of citizens that endorse the idea of the landscape as a common good, what we must acknowledge is that the future of Salento passes through soils. As much as the past was spent on creating it, the capacity of Salento’s people for futurability is embedded in the soil, for its central role not only at the level of explanation of the olive trees hecatomb, but also in becoming the idiosyncratic symbol of material circulation and consequentiality of actions.

Soil, both as a concept or symbol, and as the very material set of entities, blurs the distinction between the views that see the landscape under the lenses of economic interest or as common good (Pluig de la Bellacasa, 2017b). Landscape’s production, as well as landscape’s capacity for economic production, are due to the territorialization processes activated by both human and non-human entities. Understanding the landscape and the soil as productive entities, might be concurrent with the idea of the ecosystem as a ‘common good’, as long as those who economically benefit from it, care for it. This is well clarified by Roberta, one of the heads of ‘Cooperativa Karadrà’ from Aradeo (LE), a labor cooperative almost atypical for the surrounding area.

«This, the Nardò plain, is the one with the greatest depth of land, and therefore of cultivation capacity... consequently this is the area in which the oil production system, the great oil chain, has always been collateral to the rest of production. Where you plant the olive tree, it is a crest plant, and it is a plant that goes on the stones, therefore the land that cannot accommodate horticulture, fruit trees, vineyards, is planted with olive trees. The Otranto area is an area of very low cultivation capacity. There is no land, there just isn’t. Not only olive trees, you can make chickpeas, legumes, grains, as in the Cape [of Leuca], you can make lupins. You don’t have a cultivation suitable for the vineyard, for the fruit tree. The issue is at the root level. To say, in Lagorosso, they have short, cold soil, a depth of 30 cm. Here, on the other hand, we have 6/7 metres, there is a lot of retained water and we can grow vegetables even in summer. If we don’t understand this, that we need a collective vision, where our productions don’t have to be in competition, and everyone doesn’t have to grow everything.. it means setting aside individualism, otherwise no one will grow». (Aradeo, LE, 24/02/2021)

Soils, as we tried to show also with Antonio’s words, have been gradually becoming the symbol of Salento futurability during the Xylella debates, just as they were representing the very material site of the ongoing transformation. Thinking with soils means to draw from them social alternatives, such as the alliance between neighbouring areas with different soils, in order to face with strength the difficulties of market economy. Another piece of the interview with ‘Cooperativa Karadra’, may demonstrate that these specific semantic and performative capacities of soils are strictly linked with the kind of action acted upon them that is the practice of care, as opposed to the exploitation of the productivism endorsed by conventional and intensive farms.

«It's not that and I don't take up a field because I don't like it since I can't do certain things. We set off and do reclamations.. I go to a piece of land, and if we realise that it needs three years of reclamation, it means that I'll make a proposal to the owner... we don't avoid land that needs reclamation and work, just the opposite». (Aradeo, LE, 24/02/2021)

«We work in regenerative agriculture. We have recovered biodiversity, the Aradeo tomato. The reason why we recovered that biodiversity was born of needs: we are in an area of hydrogeological instability, which no longer has productive capacity (and is unable to provide a work response to the territory). Response to real, productive problems. Do we have water? no; land, yes. I don't think we could work conventionally with mass products. I don't think it's possible anymore, there's no environmental answer to it at all. The average amount of living matter, organic matter, in the soil in southern Salento is 1.3%. This is why I say that the same standards cannot be used in the agricultural system as in other systems of economic production. If there had been a long-term vision, (on the part of the ruling class) the organic system would be the current system, of all, for a long time. The criterion of productivity has been followed and not that of the yield of the land over time... that is why I say: what is the point of private property, of being able to decide on lands that should be able to produce for millennia? The question arises even more, if there is no long term in the projection, you find yourself having to work on an emergency basis...» (Aradeo, LE, 10/03/2021)

The fact 'the time of soils' and the fast temporalities required by productivism are in most cases at odds, points at the idea that soils provide an indication of inter-species temporality (Puig de la Bellacasa, 2017b). From these considerations stem out a whole set of alternative visions about the past and especially about the future socio-economic determinations. Practices as regenerative agriculture, are aimed in alliance with the soils towards materializing the futures envisioned 'together', acting against hegemonic and subjugating social and economic structures (Papadopoulos, 2018). We must stress further the material entanglement in practice, embodied in the kind of action taken upon the fields:

«So, regenerative production as we do it is not a production that has outputs yet. Because if you don't hormone the soil or the plant, but instead you wait until you nourish the soil and you get a feedback from the organic matter point of view, and then go back to having higher field yields... it will take time.» «When we talk about the figure of the farmer we should renew it [...] so it is a custodian... the word 'custodian' relates to the environment that surrounds him/her. The distinction should be made between the farmer and agro-industry. You are damaging third parties when the patriarchal system is keeping the upper hand on you... and you are maximising your income at the expense of an environment and a community [...], you are damaging a community... and here we come back to the issue of private property, another staple of capitalism and patriarchy. Freedom is conceived as the freedom to own... but freedom is [...] to think that in 20, 50, 1000 years, the same area that served me to survive will also serve those who follow me. It is as if the twentieth century, having codified private property and the individual rights connected to it, did not take into account the rest of the happiness [of non-humans], which is considered, which is what gives well-being to the individual... that is why the economy of procreation, which is a submerged economy, was kept out of the calculation». (Aradeo, LE, 10/03/2021)

Something from the feminist sphere comes along contesting the established social structure of patriarchy and capitalist economy, something grounded in the enhancement of the practice of care, historically bridled with procreation, but that nowadays emerges also as bounded with the non-human environment and especially soils (Puig de la Bellacasa, 2017a). A notion and an affective practice that don't go without problematizations in Roberta's words:

«The problem in the analysis of the act of care is that we should live in a society that still provides for some spontaneity, which is not here. The act of care per se and the society of care are not negative concepts, but today care is codified in a system that does not contemplate to make space for it, in the sense that the spontaneous can exist only whereas there is not a material necessity: if there is a need

within a society and that society is economically unable to respond to it, there is the urge for someone to take on that responsibility. So, in reality it is not that care per se is a negative factor but the problem is that it should not come out of necessity. Today you are in a society where women are still delegated the act of care at 360° degrees from the child to the elderly (to speak from a human point of view, not of the environment). The idea that has been developing in the last twenty years is that those who are fighting for the rights of the earth are women, even the leaders who have emerged are women, and the most extraordinary thing are those who we call the third world, who are codifying new female figures». (Aradeo, LE, 10/03/2021)

Something that, among others, Maria Puig de la Bellacasa has prominently noticed, is that soils and feminism are both ‘involved with neglected things’ (2017b, p.170) and they thus share the capacity to highlight glimpses of ‘alternative livable relationalities’. What Bellacasa asserts is in sum attendant with what Roberta claims and actually puts in practice, which is that thinking with soils gives kicks off for the blasting of the subjugative socio-economic structure of productivism, something that contests patriarchy on the other side. In such a view, Roberta’s care for soils is not just a ‘form of exploitative and instrumentally regimented care, oriented by a one-way anthropocentric temporality’ put in place in order to increase productivity, but something that has the potential of materially transform human social relations, by means of changing those and staying with non-human entities. Human-soils relations, as we have attempted to show with Roberta and Antonio’s words, come to value practices of care as those who permit becoming in intimacy and material-semiotic perception with the entities inhabiting the environment (Bertoni, 2013). As Bellacasa states, attention to soil care in “these times of environmental unsettledness brings to light possible alternative practical, ethical, and affective ecologies”(Puig de la Bellacasa, 2017b). Thus not only care emerges as the practice capable of disrupting anthropocentric views of the future, and to see the future as an outcome of thinking-with non-human entities, but also soils have come to gain the capacity of making actions immediately meaningful and political, especially towards the future.

The peculiarity of soils in Salento, following the research we have been conducting for years now, is to embody both the symbolic dimension of transformation while being the real matter of that transformation, not only of landscape and economy, but potentially of society. Experiences of soil care offers the opportunity of actually thinking with non-human entities, which means, by getting involved in ‘temporal rhythms of more than human worlds’, to concentrate on speculating and materializing futures that “are obscured or marginalized as unproductive in the dominant futuristic drive”(Puig de la Bellacasa, 2019). In the way eco-ethical obligations of care ask for an intensification of involvement in making time for soil-specific temporalities, we could say, soils are co-producing the future with humans.

With these final remarks we tried to render the material and possible dimension of the entanglement between aspirationality, futurity and the matter constituting the landscape. Both from a sociological and anthropological point of view embedding non-human entities perspective has signified a massive turn, because of the way non-human actions and futures influence the social positioning we assume in order to think about the very concept of relation.

The ethnographic material presented here has attempted to decipher and tell which cultural perspective frames the rural challenge in Salento, within the materialization of a visceral relationship between society and soil production. A relationship that is made of practices, of which sociological research has, on the other hand, highlighted the implementation. That is understood as the disposition of the habitus: the practices that are part of those conditions build possibilities but also constraints in the planning of the future. Therefore, from both research approaches, at least three processes with respect to ‘limits’ arise. First, the ongoing problematization of the limits of the agricultural system in identifying a point of contact between the ‘value of care’ in the ecosystem relationship, and the needs and requirements imposed by economic productivity; secondly, the settling of the limits of spatial planning’s capacity to respond to the contingent problems related to the epidemic state of the countryside, as well as to a systemic constellation of exploitation’s practices, resource extraction and

environmental pollution - a scenario of a border territory, in which the last attempts of enclosure of late capitalism are perceived with greater tangibility (De Angelis, 2017); finally, the attempts to re-imagine the limits of ethics, on the one hand revitalize the struggle for the commons and activates transformative processes of consciences, values and tools of territorial reproduction, on the other hand, perhaps by definition, struggle to extend its territorial impact, since it lives and inhabits 'other' spaces and temporalities, not coinciding with the fagotating rhythms of capital.

The research, still in progress, does not allow us to conclude this article with certain answers, but rather to keep alive an exercise of openness on the questions that have so far moved our analysis. In Salento, the theoretical normativity that we, as academic researchers, identify in the politics of care and in the need to recalibrate a different relationship with the non-human - an urgency of the Anthropocene - clashes with a macroscopic complexity of visions and stances, with a history of the territory that perhaps, to a certain extent, has been written until yesterday by others (Cassano, 1996) and that only recently has claimed the Salento's people as author subjects. But the politics of care also include new eco-temporalities (Puig de la Bellacasa, 2019) that broaden and dilate the measures of production-oriented human time (where even the creation of the forest itself can be read in productivist terms). If the pathogen, as a phyto-actor, has had the power to disrupt or clarify perceptions and representations of this territory, we believe that the irreversible process set in motion by the epidemic is the first step in making Salento a "highly complex living system" (Magnaghi, 2010). Indeed, the existence, use and intrinsic value of nature and its processes move in a regenerative circularity and through renewed co-evolutionary processes, looking at the possibility of a future rebalancing between the anthropic settlement and natural resources that allows, in time, the proper survival and reproduction, "not restoring territorial balances now lost (if they ever existed), but establishing new and more efficient ones through the production of new territory" (Magnaghi, 2015).

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