"Coral gardens" and their *Denials*. Culture, Environment and the Uncertainties of the Future

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O taro, tenacious as the bracken,
O taro, anchored, anchored firmly,
Blossom on (Malinowski, 1935a, p.281)

Abstract

"*Coral Gardens and Their Magic*" (1935) of B. Malinowski represents part of the "mythical legacy" of the foundation of cultural anthropology, it remains an unstudied book although it reveals an ancient and important denial and ambivalent tension in taking into account the relationships between cultures and environments. In these removed legacy, the dichotomy of culture/nature are posited and will later encounter new contradictions in reading the scenarios of environmental intensive changes, which are today at the heart in conceiving futures. This urges cultural anthropology to put back culture in the environment, as it happened at its foundation. Further, anthropology needs to reintegrate futures in its ethnographic tools not as scenarios of predictions but in the way cultures perceive, imagine and incorporate the future in their practices, in relation with non-human agents and within the wider critic of the hegemonic fascination for consumption that we have taken often for granted in our models of understanding.

Keywords: Denial, Environment, Gardens, Relationality, Palestinians

Introduction[1]

Gardens, in the sense of family farms and small-scale agriculture, are today not only a locally diffused and resilient reality for many small farmers, but have also become a global icon within the critics of chemical and petrol based intensive agrobusiness and in the search of food security and sustainable trajectories facing environmental changes.

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1 I would like to thank Lorenzo D'Angelo and the two anonymous reviewers for the comment on the draft of this paper.

As such, they are often idealized and put on the global stage in the context of policy debates surrounding the environmental crisis and the strong contradictions inherent in the industrial agriculture-food chain model: increasing water scarcity and conflict, land and water grabbing and, above all, climate and environmental change linked to the increase of carbon gases in the atmosphere.

The category of small farmers or peasants was present at the very origins of anthropological legacies, inspiring passionate interest and a vast literature on farming, pastoral worlds and the marginalization of peasant societies. While conducting fieldwork of my own with Palestinian peasants engaged in family farming in the colonially occupied West Bank[2], the need to retrace the local history of resource management took me back to the beginning of the last century, when "modern" scientific agriculture was taking shape through Zionist experiments in settling the "Promised Land" via experimental modern farms and the *kibbutzin*. Here, the settlers encountered Palestinian *fellahin* (peasants) and their "primitive" farming practices: modernity, as in other regions, was testing itself out and settling on global borders precisely at the point of encounter with the "Other". Today, this land participates in many further patterns of risk, of bordering and dehumanizing the other; the overall outcome of strong uncertainty regarding the future is an emblematic feature.

The early decades of the last century also saw the founding of the methods, discipline and legacy of anthropology. Malinowski published his work on Kula rites, giving birth to the methodology of participant observation and the definition of cultural diversity as a complex object of study, requiring anthropologists to be fully immersed in their fieldwork. Strikingly, in a later and as yet unknown and unstudied publication, in specific v.1 of "*Coral gardens and their magic*"(1936a,b), he revealed that his 'Argonauts' were in the first instance 'Gardeners', implying that the foundation of anthropology was entwined with the Trobrianders' way of relating to their environment in very mundane food making and rituals.

Not alone had culture now been delimited as an object of study, but nature too had been newly defined in opposition to it, as a "unquiet guest" and a clearly delimited "field". A contraposition of culture and nature whose roots certainly stretched back further than the founder of anthropology, but that was novel in its applications. Thus, the idea of culture originated from studying an island's 'agri-culture' in opposition to the "Nature" of the Other, in a concomitant process of alterity: this experiment essentially claimed the legitimacy of cultural diversity *in relation to* the dichotomised field of 'nature', giving rise to a set of crucial ambivalences – both epistemological and material – in which we are still enmeshed nowadays. Definitely, anthro-

2 This ongoing fieldwork was initiated in March 2015 and is concentrated in the village of Battir (Bethlehem area) in the West Bank.

pology since then as posed at the centre the relationship and entanglement between different cultures with diverse environments but as two poles of a confortable dichotomy, which just in the last decades has been put in doubt in their ontological and epistemological bases (Viveiros de Castro 1996, Ingold 2000, Descola 2005): the attention has shifted therefore from the relations of culture/nature to the dynamics of relationality of culture *within* environment, as a complex system of interaction of living agents. Indeed, a huge gap remains to be covered in applying a perspective of relatedness in urban studies, in reading intensive changes of agro-business, in resources networks or water pipes, all issues that seem less environmental than a taro field. A denial of relatedness, linked to the foundation of a clear-cut fields of culture/nature, finds a history also in the marginalization of Malinowski's forgotten first volume of *Coral garden*: we depart from the tensions and ambivalences of on one side studying relations of culture and environment and on the other denying the relatedness that does not match with the *gran-partage* (Latour 1997): a crucial issue today in addressing climate change parallel to the redefinition of anthropological predicament vis-à-vis new images of "future" and catastrophic scenarios of the planet. Thus, this removed and forgotten ethnographic analysis of Malinowski represents a useful first step towards shedding light on the legacies and denials defining contemporary anthropological work, with a view to resituating culture and practices of future within the environment.

Legacies and denials of being there: local and global gardens

Although anthropologists have always been forced, as part of their "being there", to take into account the environments in which social groups are embedded, many reductionist models have imposed a clearly delimited field of culture in opposition to an even more clear-cut world of "external" nature. Indeed, culture is founded on "modern" scientific notion of nature in a set of oppositions, starting from the "West and the rest", whose crisis has been thoroughly analysed by post-modern literature. Notwithstanding this critical work within the discipline, for the mainstream nature clearly remains an object (as opposed to a subject however defined) that does not deserve to be a key focus of interest: a context, a substrate or, at times, a set of resources available to cultures, which becomes even less relevant to urban studies. Relationality is denied, and this working and "living in denial" (Norgaard 2011) is a crucial issue within the human sciences today, as we face the uncertain futures of carbon-based global capitalism[3].

3 By denial here we refer to social and cultural processes of removal, not just of climate change, but of the engagement of culture within environment, both among social

While Malinowski founded his notion of culture on an implicit idea of nature assimilated from the natural sciences, at the same time, he was forced to take note of the relationality of Trobriand culture with the tropical environment; today, contemporary "scenarios" of ecological unsustainability are pushing anthropology, and the meanings of culture, back to the forefront of the effort to understand social and environmental change.

"*Coral Gardens and Their Magic*"(1935a) of B. Malinowski is part of the "mythical legacy" of the foundation of cultural anthropology, but surprisingly it remains an unstudied and virtually unpublished book: if the known v.2 focused on "The language of magic and gardening" and thus on the first linguistic relevance within economic practices, the first volume departs from "*the method of Tilling the soil and of agricultural rites"* and has remained unknown and also difficult to find in published form, while it represents indeed a masterpiece in understanding cultural diversity, economy and ritual practices in explicit *relation* to the environment. It offers a masterly study of the relationship between culture and farming, since it well reveals the historical structural ambivalences regarding the relationship between society and "nature": indeed, this book represents an extra-ordinary laboratory of the *grand partage* (Latour, 1997).

Malinowski was well aware that simple "descriptions of gardening"(the title of its first volume) raised the key issue of "the relation of man and environment", "at least as important for our knowledge of the Trobrianders, of Oceanic civilizations and, I venture to say, even of human nature in general"(ibid. p.VII); but he also acknowledged that this theme was less "sensational" at that time than "magical" Kula rites[4] and, therefore, less publishable. In this denied legacy, the dichotomy of culture/nature was posited and would later encounter fresh contradictions in reading a society/environment relationship constrained into deterministic models, both evolutionary and constructivist.

Malinowski studied the Trobrianders' complex relations with farming techniques, famine and the risk of water scarcity, as well as their practices and cooperative systems, in which social, political, ritual and religious dimensions were tied up with food making. Here we encounter the first of our denials. The Other was, first of all, a gardener working the land, which placed the relationship between society and environment at the centre of the definition of culture: "open[ing] problems of the relation between man and environment, of some importance to economic philosophy"(ibid, p.VII) in a region "where the relation of man and nature are entirely different (p.4).

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actors, in dynamic of change as much as in the epistemological models of social sciences.

4 Despite his repeated claim that gardens were of more primary importance than Kula rites: "if the crops are not ready, the […] *kula* […] are postponed, until all that can be done by man is finished" (p.53).

The Other as a gardener

"We are going to meet the essential Trobriander. Whatever he might appear to others, to himself he is first and foremost a gardener. His passion for the soil is that of a real peasant" (p.VII): in this first statement, which was already contained in the Argonauts but overshadowed by the study of Kula rites, the Other is recognized as a peasant, although not yet as a "farmer", identified at that time (and even more so today) with experimentally- and scientifically-based industrial monoculture. "Agriculture" was invented in opposition to the patterns of resource management and plants and seeds of the Global South, in the great ecological globalization of the colonial encounter. Thus, the "primitive" is recognized as an expert peasant, but not yet as a "farmer", most of whose time, knowledge and desires revolve around farming work, which is characterised by a clearly defined moral and value system constituting what today would be called a "moral economy". At the same time, this devaluing of the peasant by portraying him as backward is in contradiction with his capacity to grow large surpluses, generating a different kind of wellbeing coupled with a complex network of exchange and distribution and rituals of abundance[5].

On these terms of recognition, the Other is condemned for the backwardness of his techniques, an attitude that comes into conflict with admiration on every page of Malinowski's book, producing a set of significant dichotomies: the author is impressed by the "bewildering" variety of garden scenery, he is struck "by the density of the population, the extent of the gardens, by the variety and thoroughness of cultivation"(p.4), their "solid foundation of wealth"(p.7). The Trobrianders skilfully "exploit" their resources of land, water (through water-holes) and seed to produce a huge diversity of crops: taro, the storable yam with its multiple varieties[6], connected to dedicated yam gardens and yam houses as symbol of plenty (*malia*); banana; coconuts; and the Western introduction of sweet potatoes.

A key distinction is drawn between the domesticated area of multi-crop agriculture in "vertical" gardens and the surrounding "jungle". The latter space was seen as belonging to "nature", and as such was generally generally disliked or feared by Malinowski as a separate world of wilderness, although it supplied a key part of the local diet at times of drought and famine[7]. This

5 "Half of the native's working life is spent in the garden and around it centres perhaps more than half of his interests and ambitions. In gardening the natives produce much more than they actually require and in any average year they harvest perhaps twice as much as they can eat." (p.10), or "In the villages […] more than half of the buildings are storehouses"(p.8).

6 It is interesting to note the confusion displayed by the author throughout the book in defining exactly which crops were cultivated and how they were classified.

7 "Leaves, roots and wild fruits such as mango; also malay apple, bread fruit, noku

world of diverse and "exotic" cultivars was legitimated for the first time as an instance of complex resource use, but seldom identified with the ideal model of Northern European modern experimental agriculture: thus "gardens", and not "farms", or "peasants" and never farmers "like us". What emerges is a complex system of political and social values, legal organization and work patterns:

> (…) agriculture and its consequences enter very deeply in the social organisation of our South Sea community, of any community; they form the foundation of political power and of domestic arrangements; they are the mainstay of the obligations of kinship and of the law of marriage. (p.VII)

All of this implies a complex system of knowledge, concerning the soil, classifications of crops and seeds[8], and a great variety of farming techniques; described in this light, the Argonauts are brought back 'down to earth' and seem more like "business men" in a farming system that displays an impressive degree of diversity but confirms the key modern notion of the "exploitation of natural resources as a whole" (p.4). Importantly, the "economics of land tenure" is also defined by its "invisibility" (p.317), given that it is made up "invisible facts" of the daily practices in everyday life: interestingly, the invisibility of local farming systems has also been raised as a key theme in contemporary literature on the globalization process (Scott, 1998; Appfel-Marglin, 1990; van der Ploeg, 2008).

Inventing economy through the Other's nature

An experimental work of the imagination is at stake here: the implicit definition of nature as an object apart, available to be exploited, outside of social relations, objectified (and thus, outside of subjective relations). In parallel, the Trobrianders' farming economy is 'invented' as a specific delimited sector of human life. Malinowski on the one hand claims to present an "organic" study of local farming, typical of the functionalist model, but this integrated perspective is based on a disjuncture that will just amplify, dis-integrating not a harmony, but other models of relatedness with non-humans (Viveiros de Castro, 1996):

> Man's appointed and culturally defined place on his soil, his territorial citizenship, his type of residence, and those rights which underlie the various uses of his soil form an organic whole of which the economic exploitation is but a part, albeit the most important part (p.319).

tree" (p.72) were recorded as the main resources drawn from the bush.

8 "They have a sound knowledge of the soil and of the crops; they distinguish between 6-7 types of soil and know well which variety of crop is best adapted" (p.76).

Here the contrast is striking: on the one hand, the "citizenship" of these peasants in a peripheral region of the world is based on their complex skills and practices, an aspect that is much highlighted in contemporary studies on the marginalization of smallholders with a view to claiming rights and citizenship for this group (Vasavi, 2015); on the other hand, this broadening of perspective is based on a reductionist model of nature, viewed as a mute and passive object to be exploited. Thus "resources" are invented, "land serves man (…), man extracts his sustenance from the land" (p.322) in a projection of the extractivist ideology that was to play a key part in the modernization of agriculture.

Mitchell, in his study on Egypt, has clearly shown that the economy and resource management "emerged" as separate fields among broader social relations and environments, "a sphere of government and self-regulation in Europe in the 18th century" (2002, p.3), developed around imperial friction and borders:

> These 'extraeconomic' origins of the economy made possible new forms of value, new kinds of equivalence, new practices of calculation, new relations between humans and non humans and new distinctions between what was real and the forms of its representation (ibid, p.5).

Of course, Mitchell's work examines a context in which modernization had a stronger material impact[9] but the "work of imagination" of that period is relevant to our line of argument here: "all actors are humans as assumption of social theory: human beings are the agents around whose actions and intentions the story is written", while "externals- nature, tools, obstacles, resources- whose role is essentially passive: there is still a fundamental divide between human agency and the non-human elements" (ibid, p.22). This externalization or process of 'othering' of nature is at stake where "nature was not the cause of the changes taking place. It was the outcome"(ibid, p.35).

Coming back to the Trobriand, by imagining and studying local economy in the gardens, Malinowski reimagined nature, denying local patterns of relatedness to the environment. The setting up of the economic world was simultaneously an enlargement of an image of "human" linked to the values of utility, individual work and endeavour, and rationality and efficiency, in contrast of course with local non-utilitarian practices "at work", collective cooperative systems and the use of magical techniques in the fields: all issues which are strikingly relevant to contemporary debates concerning resource use, poverty and climate change. "Mere" gardening opened up a "problem of wider implication: the relation between purely economic rationally founded and techni-

9 Huge water infrastructure interventions to the Nile, chemical-based agriculture, new food networks, malaria prevention sanitation projects.

cally effective work on one hand, and magic on the other"(Malinowski, 1935, p.X), in the well-known dichotomy between "supernatural means of controlling the course of events and the rational technique" (ibid, p.X), over which we are still quarrelling today in development literature.

Ritual and magical techniques have often been part of local systems of environmental knowledge and practice, justifying the stigmatization of peasant knowledge and the push to substitute it with scientific models of farming.

Lansing, in his work on Balinese *subbak* (1991), which are complex irrigation systems designed to support intensive rice production, showed (following a pioneering study by Geertz) that temples and rituals formed a crucial pattern of technical water cooperation, binding the distribution of irrigation up with a complex social web. What is more, he emphasized the fact that such "ritual techniques" not alone have provided the decentralized and autonomous water networks that for centuries have allowed double rice crops to be harvested, but also play a crucial role in controlling pests, reproducing biological diversity and maintaining these "engineered landscapes". Such "complex adaptive systems" make up socio-natural networks that today represent a flexible resource facing environmental change, where "ritual efficacy" is part of daily work routines and local *savoir faire*.

Malinowski witnessed to the importance of this "power of magic" at work and the crucial role of the garden magician, who was looked up to as an "expert" and exerted an "organising influence in communal life" by coordinating collective work calendar whereby "garden activities [were] synchronized throughout the district" (ibid, p.54). However, in Malinowski's analysis, "nature" was situated at too much of a distance for the relatedness of the environmental actors in the Trobrianders' common endeavours to emerge.

While he presented the local community as comprising different kinds of peasants, at the same time the emphasis on collective patterns of cooperation in working land and harvest-sharing (which followed the matrilineal network of the Trobriand political system) did not fit with the individual economic farmer of the stereotypical modern ideal then under construction. Indeed, "to the European reader the whole arrangement of harvesting must appear absurd (ibid, p.198). In other words, viewing gardening as an economic activity automatically makes the aesthetic dimensions of the work, which are so important in any peasant culture as technical means, futile and absurd albeit nice to look at[10].

10 Here we may observe another clear ambivalence, with the image of the human being contended between an individual *homo economicus* and a collective entity, although the author is aware of the "wrong opposition between individualism and communism" (p.317) with which he is labouring.

Engaging in skills: 'knowing' as separated from the environment

Gardens are a work of art in which much effort is invested "for purely aesthetic purposes" (p.80), for example in "providing strong and big yam-poles" (p.8). This is a typical case of economic patterns as bearing broader cultural and aesthetic meaning, defined in the contemporary literature as "art of place" (van der Ploeg, 2008), farming as "performance" (Richards, 1993) or agri-culture (Vasavi, 1994). Malinowski grasped a principle that has often remained marginalized in later mainstream anthropology and even in applied research: the fact that farming is made of up of "practical tasks", "skills", "practical work" and techniques, which draw equally on magical rites and "rudimentary" farming equipment ["a digging-stick, an axe, an adze, and the human hand" p.61].

Here, yet another ambivalence came into play: within a dichotomous evolutionary paradigm, local techniques were inevitably "traditional" (because they were not 'modern'). Nonetheless, admiration combined with compassion was projected onto them, by virtue of their fragility vis-à-vis "nature", given in turn by the fact that their impressive capacity to "organise and coordinate human activities" (p.168) did not necessarily correspond to productive efficacy. Malinowski, as is the case for many contemporary anthropologists, probably first encountered farmers at work in the Trobriand, despite the fact that he could also have met farmers in England, albeit of a different kind: he thus imagined "farming" through the lenses, and inevitable denials, of an urbanized Western intellectual encountering a "craftsman" (Sennet 2008) for the first time, as is evident in his words:

> I made several attempts at planting taytu and I had the "theory" of it carefully explained and practically demonstrated. But I found it really difficult to coordinate the movements of the dayma with those of my fingers and I was afraid of driving its sharp points into my hands, so that the speed of the natives received my full admiration (p.133).

This brings into play the crucial issue of the dichotomic division between "what they know" and "what they do", an epistemological question at the heart of current efforts to understand local environmental patterns as well as flexible institutional adjustment and coping strategies facing change. And, similarly to other sets of ambivalences that we have inherited, this opposition is constructed in relation to the meanings of "nature".

In positing cultural ecologies at the centre of anthropological endeavour, Ingold (2000) appropriately connected two key "disengagements" implicit in anthropology as well as in broader understandings of the human condition as it relates to environment: the dichotomy between humanity and nature (an "underlying fault") and the corresponding division between modernity and tradition. These specular oppositions are in turn connected

with ways of understanding/denying practices as disconnected from the "environment" and its processes, and as mere consequences of hierarchical and normative intellectual schemes: "skills (…), the capabilities of action and perception of the whole organic being (indissolubly mind and body) situated in a richly structured environment" (2000, p.5). Skills, of whose importance Malinowski was convinced and aware, were inevitably reduced in his analysis to strange outcomes of significant, although anti-technical, beliefs.

The margins of his text are here important. In a rare description of "what gardeners do", a brief list of things they know is presented following "and so on…": what should be analysed (their strange non-modern practices) remains unimportant. Of course this is not just true of Malinowski, but is part of an overall legacy of dis/engagement of culture *as though* it were external to the environment, and of knowledge (and culture), *as though* it preceded the ecological process. In contrast with that legacy, Ingold has proposed a "dwelling perspective" in reading culture that departs from "active engagement with the constituents of [one's] surroundings" where "the critical task of anthropology was to understand the reciprocal interplay between the two kinds of system, social and ecological". In short, a "difference in perspective between seeing ourselves as being within the world and as being without it" (p.3).

Othering nature: the (im)possibilities of relationality

In this extraordinary work on farming, after a set of human operations, a given "stage has for the most part to be left to nature" (p.61)[11]. At the roots of anthropology, *othering* nature represented an epistemological device for defining culture, which factored out the relatedness and interdependence characterising all systems of environmental knowledge. In fact, it is in the "reorganisation of evidence" (p.330) that the two worlds are invented as separate, while strikingly the descriptions contain many hints of a mysterious interdependence between natural agents (not objects) and gardeners. Thus, nature is as "spontaneous growth", a "virgin" environment, insofar as "nature here seems not yet to have been subdued by man and fashioned to serve his purpose" (p.61): this dichotomy is a prerequisite for advancing the ideology of dominion over nature and the evolutionist scandal of the poor means of non-Western, non-modern, culture. The 'jungle' or bush became the emblem of the "overwhelming force of vegetable life" versus "the ap-

11 "Seeds sprout, the vines climb upward round the supports, the taro plants develop their big leaves and their roots; while human intervention is confined to weeding, by women, and a preliminary pruning by men" (p.61).

parent futility of man's effort to control it" (p.3). Here, the Trobrianders "precariously" shelters and magic were mainly interpreted as a fragile human claim to "the power of mastering the forces of nature" (Malinowski [1922] 2014 Routledge Classics, p.405): a clear projection of our model of ecological premises. Therefore, nature was immutable and mute but at the same time a powerful substrate: the jungle stood as an icon of culture delimitation, not so much in the eyes of the locals as in those of the anthropologist[12]. Most remarkable, however, is Malinowski's contradictory emphasis on the Trobrianders' vulnerability in relation to their large-scale production of wealth (*malia*), ritualized abundance and continuous production of an agricultural surplus, at the base of all Kula rituals and the system of exchange[13], only interrupted by periodically recorded cases of famine (*molu*).

Notwithstanding this othering of nature, evidence of relatedness and expertise in local practice leaps out from the pages: Malinowski reported that agricultural sequences were tied up with the phases of the moon and the rhythm of the seasons, or that "it was explained to me that ashes fertilise the ground; that deep planting is advisable in dry seasons; that stones must be removed from the soil; that weeds choke the crops" (p.77).

In this first attempt at delimiting the anthropological predicament, Malinowski first encountered farming knowledge and practices, already legitimized as "agriculture". In this initial demarcation of spheres, the process of separating culture and nature ran parallel with the disjunction of local knowledge from the body and the environment, where nature is "detached, disenchanted observation of a world which is merely occupied"(Ingold 2000, p.210).

We have inherited tools of understanding modelled on this disengagement, generating great difficulty in grasping patterns of engagement in other cultures. *Coral Gardens* remains a powerful and forgotten portrayal of a complex agri-culture given that "the presence of food means […] the absence of fear; security and confidence in the future" (p.81): local resource use and relations were ways of thinking about the future and interrogate, within this legacy and its ambivalence, how we think futures of culture today within environmental change.

12 A similar rhetorical role has been played by the "desert" in much of the literature on arid and semi-arid areas (Van Aken 2012).

13 "It is astonishing how many of the various events of public life which always happen in the central place refer to gardens, or at least involve the use of garden produce, […] the sight of accumulated raw vegetables and fruit"(ibid, p.26).

Futures with(out) environment: anthropology at the Time of the Anthropocene

Global and local perceptions of the future are today increasingly tinged by a sense of crisis and emergency concerning climate change: carbon dioxide emissions from human fossil fuel combustion are taken to have been the main cause of atmospheric greenhouse gases and rising temperatures since pre-industrial times. Models of the threats inherent in environmental changes dominate the scenarios of the coming decades, changes that will occur unevenly among populations and will often affect the more marginalized populations that have provided the "traditional" focus of anthropology. Recognition of the anthropogenic nature of green-house gas emissions and other related human "drivers" (AAA, 2014) have suddenly made humans into "natural agents" playing a part in changing the environment; equally, "nature" has suddenly become suspect, with existential and epistemological upheaval following on the discovery that "nature" was, and is, not stable, immutable or susceptible to being managed or consumed by modernity. Futures are thus more and more defined in terms of uncertainty, including in the human sciences and this poses a significant challenge for anthropology. An American Anthropological Association "task force" released a report entitled "Changing the Atmosphere. Anthropology and Climate Change", which stresses the main roles and legacies of our discipline in living "with uncertain futures" (AAA 2014, p.59), while acknowledging the role of humans in natural processes:

> Here we focus on four of the most important drivers that anthropologists have studied: expanding consumer culture, land use, the sources of energy, and population growth. Many more drivers, like migration and remittances, growth of mega-cities, and the construction of dams, roads and other capital-intensive infrastructure and energy projects, in turn are linked to these four key drivers (2014, p.24).

In this "natural role" of culture, "land use change is considered the second most significant contributor to climate change" (AAA 2014, IPCC 2013): food chains are a threat at the centre of an unsustainable process[14]. "Suddenly, with the question of the Anthropocene everywhere on the table, anthropologists are confronted head on with the question of urgency and political relevance" (AAA 2014, p.7): the Nobel prize-winner Paul J. Crutzen has suggested that we have entered a new geological era that he calls the Anthropocene, because differently to the Holocene period, it is "an era in which

14 A recently published report by Grain (https://www.grain.org/article/entries/5317-trade-deals-boosting-climate-change-the-food-factor) holds the global agriculture and food network accountable for over half of total greenhouse gases.

human beings act as a force determining the climate of the entire planet all at once"(ibid. p.7). This perception of radical, and long-denied, change is providing the impulse for an epistemological shift in reading socio-natural processes, with ecological dynamics and cultural processes coming to be understood as related to one another. It follows that the set of denials mentioned earlier have reached a point of conflict: acting and consuming "as though" we were not engaged with a world that is finite, as though we were contemplating it – as in Google maps – "from the outside", or thinking of nature as a discrete immutable substrate awaiting human management, attribution of meaning or protection, all reproduce "traditional" denial patterns. However, as psychodynamic theory suggests, all forms of denial "emerge" repeatedly as patterns of alienation: they are not just forgotten, but are socially linked to the control of disturbing emotion connected to vulnerability, social risk, fear for troubling events, and characterize social process of indifference, constructed ignorance, sense of guilt or feelings of helplessness facing (in denial) environmental change.

Positing culture as a clearly demarcated field, in the midst of other fields and gardens, has removed relatedness: as experts in *social relations*, anthropologists have denied other "social" relation with non-humans that constitute "our daily bread" within environment. Nonetheless, such relatedness has underpinned the failures and success of many cultures, which have not denied the reality of living in association with live forces that impose "relations" and limits. These "uncertain futures" raise the issue of how we may think of tomorrow, in light of the broader lack of attention paid to futures in our present and past fieldworks.

Future as a cultural and environmental fact

> Anthropology has had surprisingly little to say about the future as a cultural fact (…) the intellectual infrastructure of anthropology and of the concept of culture itself, substantially shaped by the lenses of pastness (Appadurai 2013, p.285).

In his most recent work, Appadurai appropriately underlines this lack of emphasis on the future in our legacy, which I see as connected to the set of denials of environment engagement. Indeed, the future as an object of study has been "sourced out" to other sciences that are "obsessed by future" (Persoon 2000, p.8), such as economy and planning, and which exert "control" over the forecasts and predicted scenarios of today. Augè (1993) had already highlighted the social dynamics of the acceleration in how we experience time, the restriction of spaces and the presentification of modernity: in sum, "the future is now" as a piece of global rhetoric. Of course, anthropology has

always studied the "future" of cultures, in terms of "embedded time", agricultural calendars and time definition, time-keeping in relation to power, as much as Millenarist movements; likewise, it has devoted attention to temporal strategies used to "other" and exoticize non-Western societies (Fabian 1983). Nonetheless, the issue of the future comes more strongly to the fore in the context of a "risk society" and in light of challenges to the ecological sustainability of current models of development. "In the Western world, the future is used as a resource: it is calculated, insured, predicted, colonized and discounted" (Persoon 2000, p.12) and "the guardians of the future are the future-making institutions" such as markets, politics, agricultural and food science. According to Appadurai, the future is equally as cultural as the past, given that it is made up of imagination, prediction and the capacity to aspire. The key point here is that "we must not forget that the future is not only a technical or neutral space, but is rich with emotions and sensations (…): apprehension, vertigo, anxiety or disorientation" (2013, p.287). The capacity to aspire is embedded in local systems of values, meanings and dissent and is "unevenly distributed". This has to do with notions of the "good life" and of the opulence of modernity. The third element, prediction, is linked to "knowing" uncertainty, in a broader capitalist context of speculation on risks and disasters: what the author defines as "neoliberal patterns of gambling" or "of disaster", based on an "ethic of probability" in the management of metadata and the related financial speculation in contrast to the future as cultural fact that implies following an "ethic of possibility".

This perspective opens up the possibility, and the need, to integrate futures into ethnography, not as futuristic statistical predictions but as the way that cultures perceive, imagine and incorporate the future into their daily practices. The aspect of Appadurai's thinking most relevant to the line of argument pursued here concerns how this important shift follows a denial of environment: human aspiration to futures, and their daily practices, take as given a well-separated and a-relational "nature", suppressing the reality that the human has explicitly become a "natural force", and as a consequence, that "nature" is changing faster than before. Many capacities to aspire, as the development literature clearly demonstrates, are linked to local resource patterns and knowledge that are entangled (and not in in "harmony") with their environment, in a context of increasing marginalization of rural peripheries: one of these aspirations is definitely the autonomy in maintaining their way of relating to place and their ideas of the human in relation to the environment. Future, and its uncertainties, is a cultural fact, but is very much an environmental fact.

If future has been denied as a privileged object of anthropology, this is also due to conceptions of the human, and of human agency at work, as disengaged from the environment. In contrast, "the very idea of the Anthropocene places the 'human agency' (…) smack in the center of attention"

since "human agency has become the main geological force shaping the face of the earth" (Latour 2014, p.4). Here Latour summarizes this dynamic:

> The name Anthropocene brings together three features fairly familiar to anthropologists: the concentration on human agency; the necessity to tackle again the connection between what used to be called "physical" and "cultural" anthropology; and the reopening of the key question of what is common and what is specific in the various ways of inhabiting the earth (ibid, p.7).

Where Malinowski (1935a) based the possibility to translate other ideas of human (the local gardener) on an implicit definition of the "natural" as external and weakly related, the postcolonial historian Chakrabarty has challenged the human sciences to address the Anthropocene by analysing three key "images of human": "the universalist-Enlightenment view of the human as potentially the same everywhere", "the postcolonial-postmodern view of the human as the same but endowed everywhere with what some scholars call "anthropological difference"—differences of class, sexuality, gender, history, and so on..." and "then comes the figure of the human act as a geological force on the planet, changing its climate for millennia to come"(2012, p.12). The increasingly rapid environmental change that is already affecting many populations, obliges us to look beyond the naturalist model on which anthropology has long been uncomfortably seated:

> This implies that humans are now part of the natural history of the planet. The wall of separation between natural and human histories that was erected in early modernity and reinforced in the nineteenth century as the human sciences and their disciplines consolidated themselves has some serious and long-running cracks in it. (Chakrabarty 2013, p.10).

Palestinian gardens and their uncertainties

In early 2014, in the course of my fieldwork on the local practices of Palestinian smallholders in the Occupied Territories, Malinowskis' fundamental and forgotten work helped me to pinpoint key sets of ambivalences; 'Coral gardens' became a "pre-text" for my fieldwork on Palestinian gardens, not of course in terms of geographic contiguity, but as a historical legacy illuminating meanings and unresolved ambivalences of "farming", nature and skills.

In the same highly experimental period of nearly a century ago in which Malinowski was carrying out his fieldwork, a Polish Jewish agronomist, El Ezari Vulcani was conducting an applied study on "modern farm" and its encounter with "primitive" Palestinian gardening in what has become later Israel and the Occupied West Bank. In his work, I encountered similar definitions of farming, of the local peasants as the "Other" and comparable

work of the imagination in defining nature as a separate object of management. This agronomist, who later became a national icon of Israeli development, immersed in an evolutionary understanding of the native population, obviously condemned the "*fellah's* (peasant) primitive farms", but could not avoid admiring their patterns of work, savoir faire and self-sufficiency *in relation to* their environment:

> The whole farm of the Fellah forms an organic unity. Everything is produced in it by its own powers: he is not dependent on any external economic factors and he is not affected by the changes and vicissitude of the outer world. The simplicity of his implements constitutes his strength in the struggle for existence. His world is not governed by the principle of time is money, but by the principle of "preservation of matter". He allows nothing to go to waste. Everything which appears to be lost returns to him after various transformations (1930, p.40).

In short, forced by the colonial encounter, he displayed strong "recognition" of what we currently refer to as the relatedness of culture and environment, or what contemporary agro-ecology views as the ecological dynamics of farming practices[15].

Today the West Bank is a tragic laboratory of walled futures: a colonial space, in which we can observe new techniques of territorial colonization and segregation, of contiguous separateness and confined categories of humanity, but equally, a "traditional", or even "Biblical", farming space. It is also a difficult place in which to think about the future given the dehumanizing and schizophrenic character of the new high-tech colonial encounter: generations of local population under military control, the peculiar (and more and more globalized) techniques of spatial control being experimented with here, the high conflict situation inevitably generating by the "encapsulation" of vast numbers of Palestinian youth, land and water grabbing, all clearly push issues of "farming" and "environmental change" to low priority status from local perspectives. Other more immediate problems and strategies are at place. Nonetheless, cultivating smallholdings has become a crucial place of local time and symbolic investment in the cultivation of "their own" food as part of defending their land, and countering the daily military and colonial offensives and land grabbing.

Local environmental knowledge and expertise, which has been generally substituted by a mix of colonial and aid modernization patterns as part of a general devaluing of agriculture, remains entrenched in these "domestic", terraced irrigated gardens (*haba'il*), retaining a strong emphasis on the relatedness of resources: awareness of the limits and flexibility of resources, the *circular*

15 For a broader presentation of Vulcani's perspective and contemporary local patterns of work, see Van Aken, 2015.

exchange of ecological resources in which "nothing is wasted", the local reproduction of ancient rainfed seeds (*baali*), which would otherwise be substituted by intensively irrigated crops for the market, the renewal of soil fertility as the basic premise for sustainable home production… in short, many aspects that Vulcani was forced to admire and that contemporary agro-ecological science and even official policies recognize as having a role to play in addressing the global agricultural crisis. A set of knowledge-rich practices that paradoxically are idealized on account of their "traditional value", as symbolic capital in the struggle for autonomy, but in concrete terms, have been marginalized and pushed close to disappearance by the advance of farming modernization.

These last remaining domestic gardens are based on a relational view of the environment and the human. "Cultivating chaos" is a better way of defining this cultural investment: chaos due to the unpredictability of the shifting colonial setting, in which a water supply may suddenly be cut off or a tract of land expropriated under Israeli military laws. Furthermore, from an exogenous perspective, chaos is given by the vast variety of crops: between summer and winter, multiple horticultural crops are produced, olives are grown side by side with dozens of local varieties of fruit tree, forage is secured for sheep and goats, which are in turn kept in order to refertilize the gardens, domesticated herbs are at the base of local diet with the addition of a hundred or so wild herbs that may be collected for medicinal purposes and for food. "Disordered" grass is left in the fields to maintain humidity in specific periods or to protect tea plants from the sun, selected crops are left unharversted in gardens to mature for seed production, wild herbs that are selectively weeded never become waste but are valued in cooking and exchanged as precious resources within the family (*'aila*) network: simple examples of 'irrational' practices that daily contradict the new spatial order of scientific farming.

Circulation and diversity of resources are the key factors ensuring maintenance of these "engineered landscapes" as well as the sustainability of farming in an arid region in which having to do with limited water availability has engendered specific coping techniques over time: the selection of *baali* seeds in parallel with specific land-tenure techniques, timing ploughing based on a context-based – as opposed to context-free – relationship with micro-environmental change (wind, aridity, humidity absorbed during the winter rainy season). The key emphasis in these 'marginal' gardens is that the gardening should be done by "our [the gardeners'] own hands" in reproducing skills that may not only be understood in relation to their past ("traditional" knowledge) but also in their looking to the future: making resources available in the years to come, passing on knowledge to the future generations by teaching mule-drawn ploughing techniques to young children at weekends[16].

16 Despite the major trend towards the modernization of technology, this is still held to be the most suitable technique for the local terraced environment.

Skills, as embodied practices enacted in the environment, are seldom verbally translated or attributed importance and rarely feature in any of the hundreds of development studies on changes in small farming over the last century in the Middle East. Yet, for these Palestinians, "knowing how to do" is connected, in such a disciplined context, with being "*horr*"(free), as much as "*to know how to walk*", as a process of experience in engaging with what has remained of "their own" environment, and stands at the centre of local economic coping strategies. And the skills that define being a *fellah* (peasant as cultural marker) involve expertise not only concerning the colonial constraints coming to bear on farming, but are also tied up with a clear recognition of the ecological limits of an arid environment and with the practical process of being in relation to other heterogeneous and moving non-human "actors".

This brief ethnographic sketch helps us to observe that Palestinians, in the midst of enduring colonization and even a trend towards the abandonment of agriculture, perceive, imagine and incorporate frames of the future in their practices, while continuing to draw on the past, albeit in the context of marginal and uninteresting gardens: a future that is not only cultural fact but also an environmental process, in which cultural skills are not viewed as detached from the environment in which they are enmeshed.

For this reason, local management systems are receiving renewed attention, even more so given the need to address environmental change: in the search for local and global patterns of "adaptation, vulnerability, and resilience" to environmental change, as the three main notions leading studies of global warming, features such as local flexible institutional patterns, farming knowledge and investment in diversity, flexibility and a multidimensional relationship with resources (Van Aken 2012, Roncoli 1999) are set at the forefront in the study of uncertain futures. These agri/cultures, in their heterogeneity, far from being frozen or ideal, are contemporary testimonials to patterns of co-production of culture and environment, in which the symbolical meaning accorded to the limits of human action, and *relationality* with other agents, are crucial in local "productivity". The capability of local systems and networks to adapt to change, to take into account the "complexity" of a simple garden point up the key role today, in facing uncertain futures, of institutional flexibility and of a way of relating to the environment that does not deny either the relations and the changing environment.

Conclusions

Scenarios of dramatic environmental changes, in terms of both vulnerability in resource-use and climate change, are at the heart of conceiving futures today. This urges cultural anthropology to put culture back into the environment, as was the case at the foundation of the discipline in "Coral

gardens", and to depart from the set of ambivalences and of implicit denial that today are amplified by the fact that the environment is changing more rapidly than ever before and change and agency are not just a human affair. And by denial, of course, I do not mean the mere refusal to acknowledge the existence of climate change, but the process of *othering* nature, of disengagement from our ecological entanglement with the world, implicit in our epistemological approach: a position that is reflected in our consumeristic behaviours and ideologies, our fetishization of nature, as well as in models of development[17] and understanding the 'human' that deny, hide or transcend the *relations* in which we are enmeshed.

However, as with any pattern of denial, it continuously emerges in the form of symptoms and conflict. Nature has indeed become the "Unheimlich" described by Freud: at the heart of our sense of home (Heim), of security and modernity, we daily discover with anguish our (suppressed) interdependence vis-à-vis non-human actors as "uncanny relations" (Kaika, 2005) or as "causes" of disaster and "risk". Consumerism and our relationship with things, and the global fascination with opulence as an icon of modernity are not an ecological thought, they are not "natural" but are very much an ecological practice and regime, with the consequences associated with entering an Anthropocene era. In the midst of these uncertain futures of environmental change, one certainty stands out, as many other cultures have shown, even in their failures: the certainty of being engaged with an environment, which is a process, and not an object, in which knowledge and skills have their life. The "magical gardens" of Malinowski represent the foundation of culture as a separate field from nature: but at the same time, the author could not avoid, by "being there" and by virtue of his ethnographic work, hiding the relatedness that was jumping out of any taro field.

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17 "Yet in climate change, consumption (such as buying a car or using electricity) continues to deplete resources, beyond the initial production and through an entire life of an object (…). To some extent, climate change is unavoidably about our global thirst for goods, and in making these links more visible, anthropologists have the potential to shift the discussion about both topics" (Peterson, Broad 2009,p.80)

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