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**THE SAHARAN OASIS PUT TO THE TEST OF ITS LANDSCAPE  
THE JERID AS AN EXAMPLE**

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Oases of the Sahara can be seen as landscapes: but can we reduce the oasian landscapes only to what can be apprehended visually? I will introduce the notion of socioecological landscape to support the double dimension of these oasian landscapes as ecological and social products and constructions. Such an approach can be applied to the notion of landscape, in general, not only to deserts.

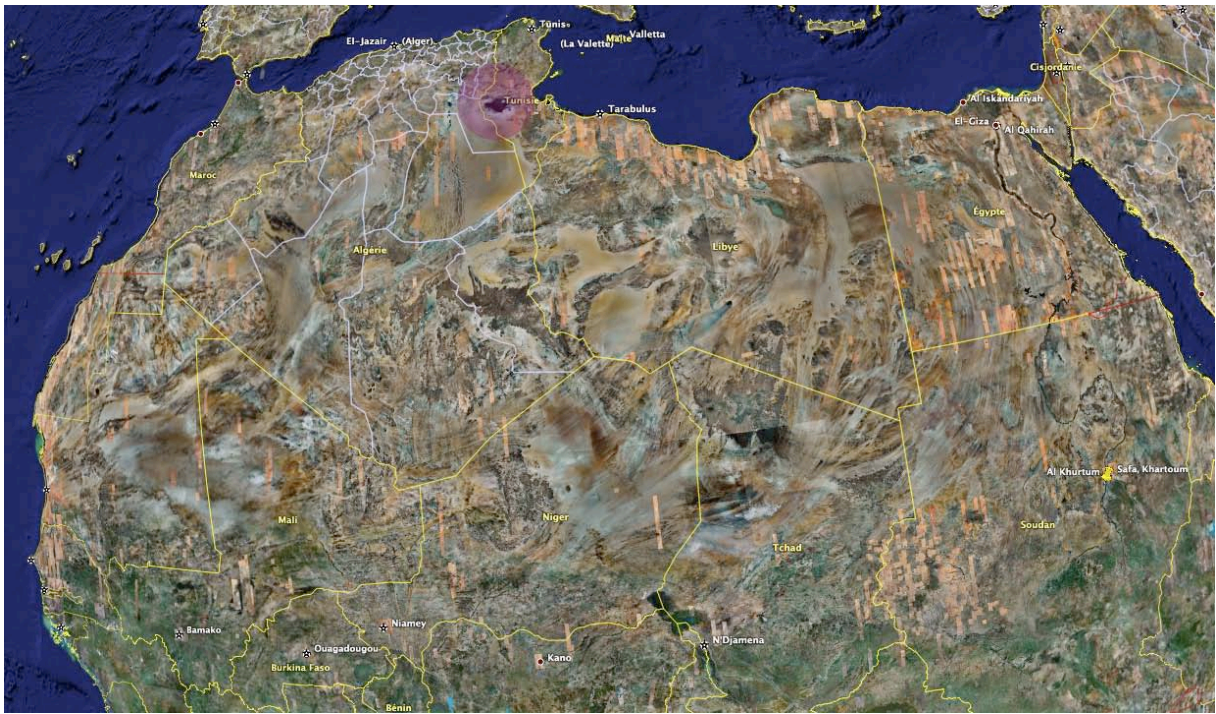
For millennia, the oases have been the centers of a sprinkled but concentrated human presence in the biggest desert areas, *a priori* hostile places for mankind. These oases are built environments. As they have an anthropic origin; so they are living landscapes, shaped by local people, but also increasingly by tourism. Tourism, like a god, is shaping places in its own image...

The case of the Jerid region (South-West of Tunisia) offers a valuable example of these built environments<sup>1</sup> and the case of Siwa oasis (in the North-West of Egypt) an interesting counterpoint (Battesti 2006a, b).<sup>2</sup>

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<sup>1</sup> Vincent Battesti, *Jardins au désert, Évolution des pratiques et savoirs oasiens. Jérid tunisien* (Paris: Éditions IRD, 2005).

<sup>2</sup> Vincent Battesti, "De l'habitation aux pieds d'argile, des vicissitudes des matériaux et techniques de construction à Siwa (Égypte)." *Journal des Africanistes* 76: 1 - Sahara: identités et mutations sociales en objets (2006), 165-185.



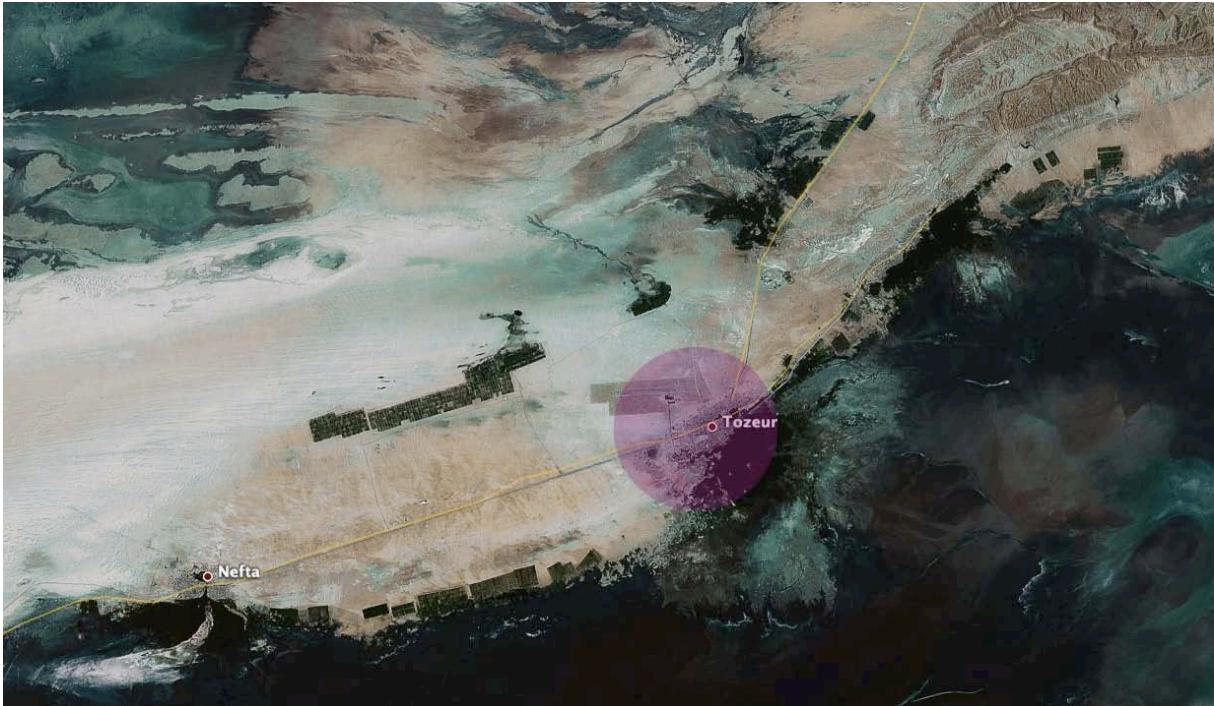


Figure 1: Satellite pictures over the Sahara: 1/Sahara, 2/South Tunisia, 3/Jerid. Google and plane landscape. Source a, b, and c: <http://maps.google.com/> Modified, visited April 1<sup>st</sup> 2007. Source d: over Tozeur, courtesy © by [www.speedfreak.info](http://www.speedfreak.info)

## - To define oases' ecosystems: artificiality.

Oasis landscapes always excite the imagination and evoke multiple images as soon as we think about them: colonial illustrations (postal cards, novel covers, colonial exhibitions' catalogs), comic strips (a lot use the extreme desert set up), or movies (like *Lawrence of Arabia*, by David Lean in 1962).

We can define briefly an 'oasis' as being a fertile spot in an arid environment. I suggest naming an 'oasis' a combination of both settlements and cultivations, and a 'palm-grove' the specific cultivated zone of an oasis. This short definition is already contrary to the Western common sense of an oasis: oases are usually seen as quiet Edenic places... as the non work place, the Eden. As if you just have to pick up fruits from the trees by stretching out your hand... or kick the stipe (trunk) of a date palm to get a bunch of dates... (see the recomposition of a comic strip below, *Land of Black Gold*, by Hergé in 1950). Oasian landscapes suggest curiously an easy lifestyle... maybe because the oasis itself is already a kind of a miracle in opposition to desert landscapes.

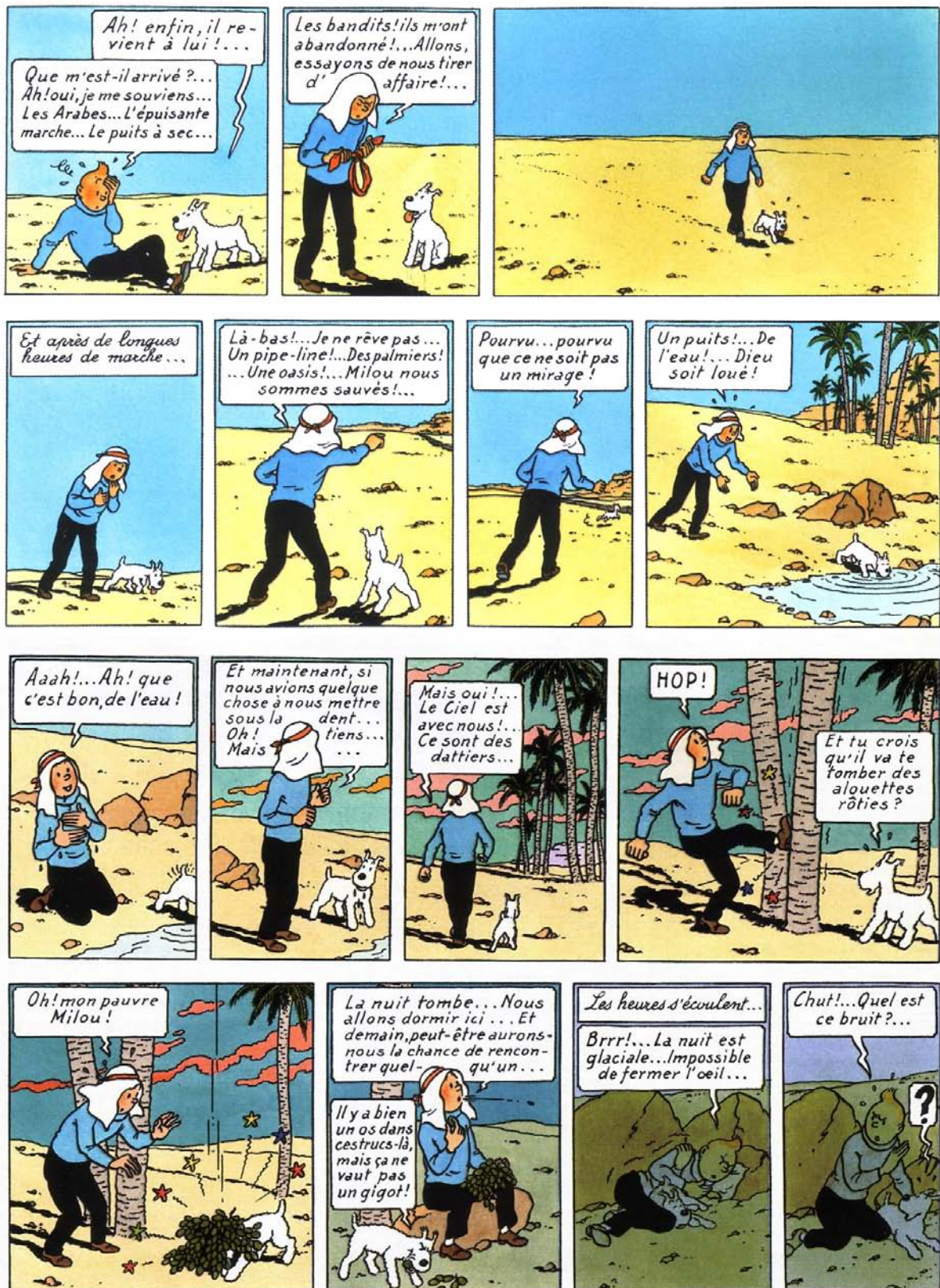


Figure 2: Extract of *Tintin au pays de l'or noir* (*Land of Black Gold*, Hergé 1950). 1st edition 1948, reconstructed

## - Needed factors to create an oasian landscape.

Nevertheless, the miracle of the oases' ecosystem is inherent to their total artificiality. There is no oasis without human labor: an oasis is an exception in the desert, a kind of a fragile bubble offering a specific landscape. And before everything else, it is agriculture. To exist, this agriculture absolutely needs the presence of three factors: water, plants, and labor (if we disregard the land).

The most obvious factor is water, of course: it's rare that water rises by itself to the surface in the desert, and different techniques were implemented in the different deserts of North Africa and Middle East: wells, *foggara* or *qanat* (respectively in North Africa and Iran, a system of kilometers of underground channels collecting the drippings of water), and small dams. Sometimes water, collected from distant mountains, flows in rivers (*wadi*) (in South Morocco, for instance). However, the sole presence of water does not guarantee the existence of oases. The case is known for the Kalahari Desert where there is no big oasis despite the many streams from neighboring countries flowing into that vast basin. For oases to bloom up from the desert, it is necessary that people have the knowledge and means to elaborate hydraulic equipment.

The second factor is the presence of cultivated plants. In an oasis, plants need to be imported. Some local weeds are used, but the subsistence of local communities depends on cultivated plants: cereals, vegetables, and fruit trees; all organized in mixed farming gardens. All these plants have been domesticated originally from plant populations of non-desert regions, even if they were then adapted to local pedoclimatic and cultural situations. Actually, even the very emblematic date palm tree, *Phoenix dactylifera*, had probably been introduced in oases (we still have no certitude on its origin, as non spontaneous — wild — population of this plant is known).

The third factor, a direct consequence of both the first factor (water) and the second factor (cultivated plants), is human labor. Palm groves are a puzzle of small overlaid gardens. When oasian gardeners of the Nefzawa region (South Tunisia) prize the beauty of the neighboring Jerid oases, they refer immediately to the local agricultural skills and expertise: the oasis is understood as the outcome of know-how. The agricultural practices may vary from place to place, but permanent features remain, defining the oasis and contributing to the drawing of its landscape. One of these features is the fact that gardeners have usually to dig their plot of land to turn it upside down with a hoe. In the Jerid it is even a quarter of the garden that is worked every year, which means that all the surface of a palm-grove is dug to a 50-70 cm depth every four years. The essential irrigation requires also hours of labor and some proficiency too.

If we consider just the work on the palm-date tree alone, it requires: the careful planting of a female palm tree and its irrigation for years; the climbing of the trunk three or four times during the spring to open each inflorescence, and then the pollination; the climbing of the trunk again during the summer in order to clean old palms, and to hang down the fragile date clusters so that they do not break; the climbing of the trunk several times during fall to harvest the dates. Now, we have to bear in mind that there are at least 200 palm dates in a small half a hectare garden, without considering other cultivation growing inside. The average surface of a garden is about half a hectare in the important Jerid palm groves (which are around 1,000 hectares). The different oases of the Jerid region host the ideal-type of the oasian palm grove, a puzzle of thousands of overlaid gardens, structured vertically. In most of the cases, a three-level structure is adopted in the garden: fruit trees, which grow under the shadow of the palm trees, cover vegetable or cereal cultivation. This structure creates its own microclimate, and along with the major components of the oases (irrigation system, etc.), they are answers to the pedoclimatic conditions. These answers were selected and implemented by generations of gardeners. The result of centuries of daily practices can be seen and analyzed today as the oasian landscape.

The oasian landscape and its own microclimate (said 'oasis effect') is the historic result of the co-presence of water, cultivated plants, and human labor: *"If spontaneous flora and wild plants are growing miserably in the lands of this region, oases appear in the most perfect form of*

*their splendor. They find there the heat of a tropical region and abundant water. [...] The oases of the Jerid are natural and open air green houses that are irrigated with lukewarm water [...].”*<sup>3</sup>

So, is the palm grove still a non-work place only? the place of visual enchantment for Romantic contemplation? At this stage, despite its appropriateness, we still find strange the idea for tourism agencies offering to tourists to spend their holiday in... a kind of a ‘plants factory’. This mixed farming and intensive irrigated agriculture shapes the landscape: the spatial boundary of the cultivated zone is directly linked to the concern with maximizing the water effectiveness and the garden output.

### - Who are the authors?

Therewith, the oasis landscape issue is not exhausted. Certainly, oasian landscapes are ‘built nature’. But the question remains: who built them? Are they only the construction of these generations of gardeners? If we formulate the question ‘what is a landscape?’ otherwise into ‘who is talking (or not talking) about landscape, how, and why?’

A social anthropologist works on the ‘local practices’, but by ‘local practices’, we should not restrain our analysis to the indigenous practices but broaden it to the nowadays-effective actors of these spaces. This means, in the Tunisian Jerid, actors of tourism and development. Those actors, with local people, converge to define what is an oasis, what ‘it is for’, how to read these spaces, and this polyphony is not without effect on the share of the resources: water, land, labor and even ideas of the relation to environment. If we focus on tourism, its impact is consequent on many daily local aspects: first on the use of the scarce water (to be used by hotels or to embellish the scenery), then on the labor (diverted from agriculture), and even on the definition of the oasis: a place for work or a place for a stroll?

I suggested earlier the notion of ‘socio-ecological landscape’: I should talk about ‘socioecological resources’ that form and define landscapes — I determined as being possibly ‘classical’, ‘instrumental’ and/or ‘relativist’.<sup>4</sup> From a local and genealogical perspective, the relativist resources are linked to tourism as their main medium. The tourist modality dates back in the region to the orientalist infatuation; tourism was first however a luxury or adventurous one (at the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> century) and turns lately to mass tourism. In 1922 “Le Grand Hôtel de l’Oasis” was built in Tozeur (the biggest oasis of the Jerid); since 1980 Tozeur has its International Airport. The preoccupation and modalities shifted from the picturesque and ethnocentrism to the pursuit of authenticity and cultural relativism.

As we saw in the beginning, the Edenic idea of the oasian landscape that minimizes its labor component prevails among Europeans middleclass tourists nowadays. Even in the place, facing or inside the palm grove, they do not see gardens, or cultivated small plots, but a forest, a forest of palm trees. Facetiously, the local word in Arabic to name a garden is *ghaba*, which usually elsewhere means... forest! For urban Western tourists, by the way, a forest is a wild land (they forget that, in Europe, nearly all forests are kept up). The oasis is seen as “nature” more than ‘countryside’.

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<sup>3</sup> Henri Duveyrier, *La Tunisie* (Paris: Librairie Hachette et Cie, 1881), 103. « Si la flore spontanée, si les plantes sauvages, végètent misérablement dans les terres de parcours de cette contrée, les oasis s’y montrent dans l’idéal de leur splendeur. Elles y trouvent toute la chaleur de la région tropicale. L’eau non plus ne leur manque pas [...]. Les oasis du Djérid proprement dit sont donc des serres naturelles, à ciel ouvert, irriguées avec de l’eau tiède [...]. »

<sup>4</sup> Vincent Battesti, "Les oasis du Jérid, des ressources naturelles et idéelles" in Michel Picouët, Mongi Sghaier, Daniel Genin, A. Abaab, Henri Guillaume and M. Elloumi, eds., *Environnement et sociétés rurales en mutation, Approches alternatives* (Paris: Éditions IRD, 2004), 201-214 and Vincent Battesti, *Jardins au désert* (2005).





Figure 3: Tourist promenade in the Nefta palm grove. September 1995, Old palm grove of Nefta. V. Battesti

This can be partly explained by a European centered historic mechanism: Europeans have their own history of the landscape and of the ‘natural nature’. “The genesis of the countryside as an idyllic social setting results from a long process of progressive disappearance of the rural proletariat [...] since the second part of the 19<sup>th</sup> century.” (Chamboredon 1985: 141) The countryside can be perceived as a natural space after the accomplishment of the process of neutralization (depoliticization and homogenization) that erases the social oppositions and historic contradictions that are embodied in its spatial organization and practices. Then, the ‘de-socialized nature’ can seem “the place of a life subjected to natural rhythms, the haven of a traditional civilization, the decor of a direct contact with a transcendence (aesthetic or religious).” (Chamboredon 1985: 142) Since the European tourists of the oases do not see an obvious (for local eyes) social inequity in the resources division (land, water, workforce) embodied in the palm groves, these agricultural lands can turn into nature and ‘naturalized landscape’.

We gave up the idea of defining the landscape to focus on the identity of the actors invoking the landscape. By the way, we merely noticed that ‘landscape’ is a congruent notion with the tourist practices of the oasian spaces: “*Landscape* is the product of the view of someone who is foreigner to it. Man doesn’t think of elaborating a landscaped representation of the place to which he is attached and where he works or lives. He maintains that space, preserves it and submits it to an order already registered in his mind. He decorates that space and embellishes it. But the conceptual schemes that guide his view [...] and that insert a value judgment in his visual analysis do not produce a mental click that instantly transforms a place into a landscape.” (Lenclud 1995: 14) Does this mean that the concept of landscape does not exist in other cultures than Western ones? We should once more displace the question. Indeed, it is less important to know if a space is perceived or not as a landscape than to understand what is regarded as valuable in these spaces.

Gardens in the Jerid are tidied up places, carefully designed. In the same place, we find beds of cultivation, irrigation networks, sometimes a sheep barn, and often the hut of the

gardener. The garden is often small, but is a private property. It is enclosed by a fence of palms, to prevent people to see from outside the intimacy of this 'domestic nature'. Tourists keep the idea that they are in a 'forest' when they're strolling in the main tracks of the palm grove (always the same tracks – they don't feel comfortable in smaller ones, because they feel that they are violating the intimacy of people).



Figure 4: Picture of an oasis garden, April 1995, Old palm grove of Nefta. V. Battesti

Despite many differences, Tourist will often agree with national (and sometimes international) officials of Agricultural Services. For example, they would both qualify as 'traditional' the agricultural landscape of the oases. That is maybe a positive value for tourists: they less and less travel to see exotic places, but more and more to experience 'authentic exotic cultures'. For the Tunisian agriculture engineer, this traditional quality is much more a negative value, and he's paid to change it: Jerid oases should take part of the modernistic agriculture project and provide currencies by exporting to European outlets the praised kind of dates, the *deglet en-nûr* variety.

Agriculture Services did not succeed in reforming old settled palm groves despite long efforts. But, using the colonial pattern, they succeeded, more or less by the way, to create *ex nihilo* palm groves where are planted fields of *deglet en-nûr* palm dates.

Why did they fail with the old palm groves? I think it is first because of a misunderstanding on the function of gardens, a misunderstanding on the practices in the spaces of the palm groves... and, finally, on the nature of this landscape.

### - Oasian landscapes: for which indigenous purposes?

I used previously the phrase 'domestic nature' to designate gardens. It is not only to underline the anthropic quality of the garden, but also to emphasize the living, inhabited quality of these spaces. More than a work place, it is an inherited patrimony for many generations, a place where gardeners spend the day even if there is no necessity of working. It is the place where gardeners express their aesthetic, their idea of beauty.

These gardens are invested of an almost Epicurean aesthetics, wholly in keeping with the Arab traditional garden. The five senses are solicited: water melons in summer or broad beans on fire in winter, the perfume of roses and jasmine, color touches and profusion of the green element, song of the birds, love songs of the gardeners in the head of the palm trees during pollination or in the evening by drinking palm wine... Ambiances are one essential component of aesthetics. This aesthetics that overshoots the only visual appreciation of an environment always raised the incomprehension of the agronomist engineers, both national or European, which, facing these gardens, saw only a vegetal confusion that is necessary to reform. However, the aesthetics quality of the oasian gardens partakes of the order of the aesthetic emotion. This is the limitation of the notion and use of the notion of 'landscape': this concept was coined for a visual definition ("all the visible features of an area of countryside or land" says the New Oxford American Dictionary, 2ed edition).

For the local gardeners, living of their plots in the old palm groves, to appreciate the garden is to consume and communicate together. The garden is a center where constructions of space surround the gardener. The garden is an intimate center and nevertheless a shared space. This conception is not the prerogative of the Jerid, and one finds it for example "in the Japanese culture, [where] the appreciation of the beautiful sites is inseparable of the human commerce (exchange of poems, banquets, tea ceremonies)" (Berque A., 1993). Perhaps between the Jeridi gardener and the tourist, one finds the opposition that Augustin Berque made between "the sociable landscape" and the "solitary contemporary landscape" inspired of the romantic Occident (the tourist and the sunset for example, in Jerid especially with the Belvedere of Tozeur: it is a viewpoint at Râs al-'Ayûn, 'the head of the sources', an artificial hillock created not to offer a sight on the surrounding landscape, a contemplative position, but it is the artifact of the labor of hundreds of workers of the palm plantation who deposited there the sandy clay of the annual clearing out of the sources (in the olden days when they still ran 'naturally').

The oasian garden is a private property, but is also a place for a collective presence: in the work (a cooperation for difficult and long labors) and the idle moments, sipping tea during the day, or drinking alcoholic beverages from the palm sap at night, in all moments talking, sharing experiences, stories, songs, names, news, toponyms... In the oases of Jerid, one can always find men gathered in '*halga*' or '*ga'ada*'. The *halga* term means 'circle' in the local dialect and comes from *halaqa* in literary Arabic (when a sheikh teaches to his disciples) and *gaada* regarding to the seated position (dialectal verb *ga'ad*, 'to sit down'). During these moments, men tell the stories of '*antriya*, the tale of 'Antara ('Anter' locally, Pre-Islamic poet and warrior), but it is especially moments when all can be said about: politics, police force and women. These masculine meetings are certainly the occasions of verbal transgressions, but also of exchanges of knowledge. The aesthetic standards are communicated, the collective sanctions the individual, knowledge is transmitted: tests and comments are exchanged on the common agricultural background, receipts; one listens, one remembers accounts and local stories. A part of the collective existence is played there, in the garden.



Figure 5: Male meeting to drink palm wine in the gardens under the date palms. April 1995, Old palm grove of Degache. V. Battesti

According to the Jeridi tradition, gardens of palm groves are not only productive areas but also recreative ones. This tradition considers ‘production’ but not ‘productivity’, ‘intensive’ but not ‘monospecific’ or ‘monovarietal’. The palm grove gardens produce always more than a biomass: they produce social fabric.

Instead, the modern technicist paradigm — represented for instance by agriculture engineers — views the oasian nature as an object of technical exploitation. The ‘salvation’ of the agricultural future of the region will be indebted to the importation of technical modern support: drillings, tractors, and other technologies. The same movement brings along other ways of thinking and practicing the environment. If the oasian nature is an object of technical exploitation, building this object is possible insofar as the oasis is thought as a resource... that means a desired good, to be appropriated. Nature is to be colonized, desert to be fertilized: this constant ‘exteriority’ towards the object legitimizes the scientific study, presumed to be the only one capable of a rational exploitation.

#### - Built nature: tourism is shaping landscape.

What is true with the obvious intrusion of modern agriculture is also true with tourism as well: the oasis represents a scenery, an exotic landscape. The practices of the modern agriculture and tourism actors make them keep their distance from the oasian space, which is a lived space by its inhabitants. This constant distance or exteriority towards the desired object, legitimizes neither really their colonization, nor the scientific study, but a romantic posture with respect to the nature, and a relativist reading with respect to the local communities. For tourists, the exploitation of the nature is less technical than ideological, but the effects are nevertheless considerable.

With a posture of distance, oases are islands in a mineral ocean. The maritime imagery is frequent to deal with the desert. The oases would be islands or ports, the desert, a sea of sand and camels, desert vessels (a particularly outstanding metaphor for Western imagination: in

practice, a number of tourists are disappointed not to find always the oases immersed into the sands, although these sandy zones represent only one seventh of the Sahara). The oases of Jerid are thus, easily isolable, accessible.

Displaying the two dimensions of the oasian 'natural set' is less and less sufficient: tourists demand at least functionalist explanations on the 'how it works', on the 'natural or social machinery implemented in back of the décor'. However, the landscape keeps for them its two-only dimensions: the third dimension, the local daily life and its details, explaining at the same time small local phenomenon and the total structure, will stay out of reach... partially because of this constant 'exteriority' towards the nature. In the Jerid, after the Belvedere view-point of Tozeur, a famous attraction among tourists is a hot air balloon (Aéroasis) as in Siwa (in Egypt) it is a 'must to do' to climb the mountain that overlooks the oasis: in both cases, what is successful is to get the possibility to have the oasis 'in a nutshell', to get a comprehensive view that — it is inescapable — put it as exterior, keep it as exotic. In Siwa, when I asked Abdu if he did enjoy climbing these viewpoints, this Siwi young man answered me: "Why should I go to see from above things I already know from below?" (Battesti 2006b). This is enough to shake the universality of the concept of landscape. Nevertheless, this contrast between local people and tourists ways to perceive the oasian environment and to qualify spaces does not ensure that the local environment or local interactions with the nature will not change.

Tourist actors do not come to intentionally transform themselves the oasian landscape in its material dimension: at the contrary, their first concern is to accede in the desert to an idealized past, a remote harmony with nature. So, as their predecessors, "we have to leave again, to go further, till the extreme limit of the Sahara, in a bled [country, adopted in French as 'hick town'] that is verily *The Bled*, in Djanet [South Algeria]"<sup>5</sup> (underlined in the text, Pottier 1945: 147) Nonetheless, they transform oasian landscape, in two ways: directly by partially spreading new ways to think the relation to the nature, and indirectly by the services and infrastructures organized to welcome them.

As all complex systems, all the facets of the local economy with the environment are intimately interlinked. Let's approach this issue by dealing with water, a key factor of the oasis life. The competition on water is obvious: water is needed for agriculture, but is needed too for the tourism sector. Tourism Service officers and hotel architects accord their view with international standards and consider that a swimming-pool is required to satisfy European tourist expectations: Sofitel Palm Beach, Ksar Djerid, Abou Nawas Tozeur, Ramla, Dar Chraïet, Palmyre, Continental, Oasis, Ras Al-Ain, Fram La Palmeraie to name some of these hotels on Tozeur. In the Jerid, the mayor of Tozeur (the capital of the region) and owner of Dar Chraïet hotel (bearing his name) went even further: he offered a 50 hectares (150 planned) golf course in the desert! Along with thalassotherapy and cultural tourism, golf is part of the new strategy decided by the Tunisian government to diversify the tourist product. What does the Tozeur Golf website advertise? (see <http://www.tozeuroasisgolf.com/>)

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<sup>5</sup> « Il nous faut repartir, aller plus loin, jusqu'à la limite extrême du Sahara, dans un bled qui soit vraiment Le Bled, à Djanet. »



Figure 6: Capture of the Tozeur Golf website (<http://www.tozeuroasisgolf.com/en/>), July 2009, V. Battesti

The golf course “*overlooks* Tozeur’s palm grove which is one of the most beautiful in Tunisia. And its 25 hectares of greens are irrigated with *recycled waters* to preserve the water table.” (I underline.) In two sentences, you have two major points towards the posture to the local nature: a posture of domination (overlook it!), and, for the sake of tourists’ conscience, the ecological concern (water is recycled). We can easily imagine that this recycled water could have been used for agriculture. Because — I didn’t yet mention this important issue — local agriculture is suffering at the same time of lack of water... water has disappeared.

Even if tourist guidebooks still mention, “over 200 springs” (in the last edition of *Lonely Planet Guide*), actually no more spring naturally irrigates the oasian gardens in the Jerid. Now some deep drillings in the ground are used. They were first dug by the French colonial farmers and administration to free themselves from the complex indigenous negotiations on this resource —, and then by the Tunisian Ministry of Agriculture. It was a progressive substitution over the last fifty years from ‘natural’ springs, maintained by the local work force, to water drillings maintained by the administration.

To say that the exploitation of water is nowadays a ‘mining’ exploitation is not a vain word. The exploited resources are non-renewable. Tube wells draw from deep water tables, very insufficiently renewed (*Complexe terminal* ‘Final Complex’) or even fossil water (*‘continental intercalcaire’*) (Mamou 1995: 73) Nobody knows if the water reserve will last ten or fifty years... The dried up springs were compensated by more drillings in the deep water tables. Because of the continuous depletion, those artesian drillings became less and less effective and more and more energy (by motor-pumps) is needed to draw the same quantity of water (Richter 1995: 42). Deep drillings have removed the substance of the old oases that lived on natural springs. Thus, there was no true profit: the drillings allowed temporarily an increase of surface area for agriculture, but now the upkeep of these new plots, and even the maintenance of the old ones, is increasingly difficult.

The table and the figure illustrate this evolution in less than 25 years in the area of Tozeur: for a decreasing total volume of water, there is a costly substitution of its origin.

Years of Reference	1970	1980	1990	1993
Rate of Flow (Springs)	55,2	16,3	2,9	0
Artesian Rate of Flow (Borings)	99,3	23,0	41,5	24,1
Pumped Rate of Flow (Borings)	28,7	57,0	98,2	120,6
Total	183,2	96,3	142,6	144,7

(According to Mamou, 1995)

Chart 1: Evolution of the exploitation (in Mm<sup>3</sup>/year) of the deep water tables (Gouvernorat of Tozeur)

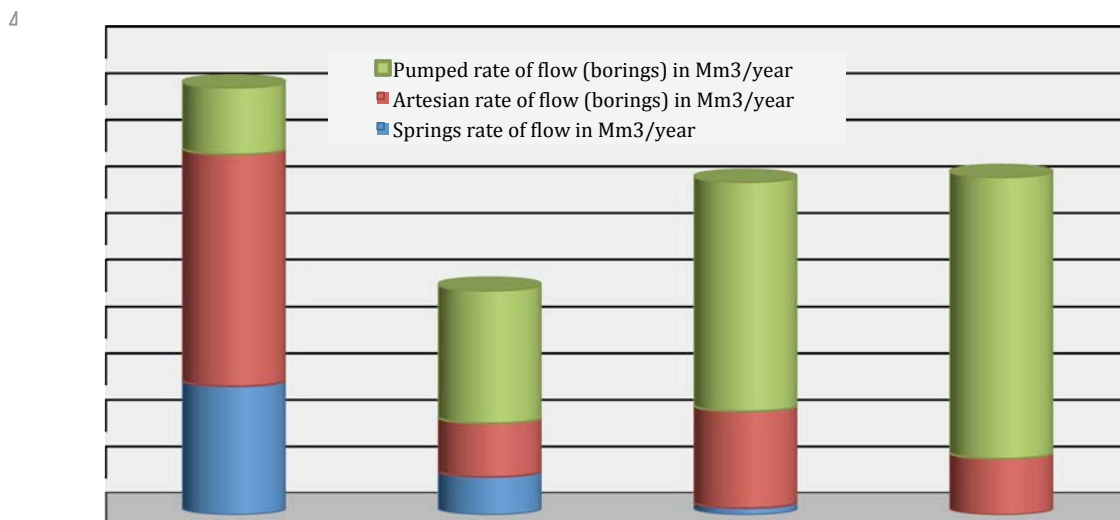


Figure 7: Evolution of the exploitation of the deep water tables for the Gouvernorat of Tozeur

Thus, how an economy of tourism can be inserted in such a difficult context? Ironically, by creating a golf course and encouraging more hotels with swimming pools. In Tozeur only, it is 18 hotels and 5 residences that offer 3500 beds. The Government aimed to ease congestion of the littoral sea-and-sun tourism with the construction of Tozeur's International Airport.

### - New ideas of the possible local relations to the environment.

Tourism shapes the oasian lands indirectly through services and infrastructures, but shapes them too through the concept of landscape. Tourism offers new ways to 'read' the 'nature'. We saw that "The 'landscape' is the product of the view of someone who is foreigner to it." (Lenclud 1995: 14) But tourists, despite themselves, increase the local resources that allow miscellaneous ways to practice the environment insofar as communication is possible in a way or another, in a view or another, between people. The local importance of ideas brought in the tourists' baggage cannot be gauged against the time spent in the region (in Tozeur, tourist pole of the Jerid, it is only an average of one day and half per person — partially because of the difficult weather). Nor it can be gauged against the presence itself of tourists, this mobile mass of Foreigners. The gap between visitors and local population is intended by the local society to

preserve itself from uncontrolled contacts and immixtures: an informal interface is thus tolerated, often represented by the class of young candidates to emigration called '*beznesa*'. The Government for political reasons also intends this gap: to keep up both a strong political control and pressure on the Tunisian population and the benefice of a tourist open door policy (but it drives out the *beznesa* to prefer its official interface). The result of these two confluent strategies is a strange kind of tourist apartheid where the contacts are mainly motivated by business, sex, and emigration purposes.

However, borders separate as much as they bring together, according to one of the famous paradoxes of Edgar Morin (1973) and the articulation of the local and the global are always more complex than a simple 'cultural shock': local communities, carefully and bashfully, give evidences of their desire to partake of the contemporary world, to the "global circulation of material and cultural flows" Is perceptible a "development of aesthetics of the '*furja*', of the panorama and the beautiful sight." (Puig 2000) This aesthetic feeling that the space confers is only visual. It comes neither along with a physical relation to the place nor with sociabilities. This local variant of the aesthetics is mainly implemented for remote landscapes, especially displayed through the television. The media is already a way to hold the object at bay. This abstraction of the environment can be said '*taby'a*' (nature), a concept out of the way of the daily experiences of oasian people of the Jerid. Today, the young *beznes* vigorously refuse to set foot in the pepper beds of their fathers... but they will now defend the oasis, or will even militate for the safeguarding of its aesthetics.

See this example: to deal with the farmers complaining about the lack of irrigation water we just talked about, the agricultural administration thus undertook a project to concrete the beds of the main *wadi* of the Tozeur palm grove in order to reduce the losses by infiltration (February, March 1996) Young people experienced this event very negatively. "The scenery is spoiled", they said. "The Government should have done it only in the hidden places of the oasis": they meant the places where tourists do not go. Criticism relates to "the less pretty" of the oasian set and the loss of its 'authentic quality' (which usually merges the 'traditional' and the 'old' quality). These '*beznes*' stand up for the 'landscape' object as it brings the tourists, of course: an interested concern. However, they develop also a real feeling for the need for safeguarding an inheritance. This type of preoccupation for the environment or the landscape is not directly issued from the local categories of environment perceptions or practices. This operation was made possible only by the exteriorization of the oasian object for local actors supposed to be from the 'inside'. First, they have had to imagine which representation of the 'nature' the foreigners have. Palm dates are no more, for them, just the most common and obvious cultivated plant (in the local interiors, the contrary representation is usually displayed: big pictures of snowy Swiss mountains forests): no, they learned to behold palm dates as also exotic features. And substantial consequences arise: some gardens start a renovation. Where agriculture services failed to reform them, tourism succeeds, and some gardens are transformed into a camping-site or a cafeteria: still more flowers and larger none-work spaces or even disappearance of the productive design.

In the same way, young people learned to not consider anymore their local customs only as archaic (although they all want to emigrate to modern Europe, in part to escape from them), but as valuable components of the local cultural package: not to live it, but to display it. The tradition is a point of convergence between tourism and the local society: the '*adât wa taqâlîd*' ('local customs') are in both case perceived as an heritage, fixed, timeless, and vouching for the true local oasian identity. In this respect, the local interface with tourism goes further in forestalling the tourism desires: they even claim in the Jerid a local Berber heritage (a very recent claim) when such ascendancy is unthinkable by the local community as a whole: on the contrary, local identity is built on the Arab (and so Muslim) filiations. The tourist demand to see Berbers (especially from French and German tourists) is strong enough to be relayed and reified locally (since the French colonial discourse put forward the Berber component of North Africa to legitimize its annexation to Europe through a presumed Latinity of Berber culture). Concerning



the palm groves spaces, young people operate in fact a 'purification' by excluding the compromising practices — living the oasis from the inside like their forefathers — and by bringing out only its aesthetics, whereas the 'indigenous' way plays on the both aspects (but differently).

The Jerid municipalities (Tozeur, Nefta, El-Hamma etc.) will probably accentuate before long this patrimonialization of the agricultural land in a tourism development prospect. With a view to consolidate this patrimonialization, and despite the water deficiency for agriculture, drillings were decided in the palm grove of Nefta in order to put back the water in the dry beds of the main *wadi*. All the irrigation system has been dug in the ground by a German project in the 1970' to avoid evaporation. In view of the expected rate of flow, water will have infiltrated and evaporated before reaching the gardens. However, the goal was rather a 'visual and sound re-enchantment' of the oasis: to give it back fully its picturesque attributes of oasian palm grove according to presumed tourists expectations. The municipality has the same schizophrenic duties as the State: to take care of two poles of activity, agriculture and tourism, even if the effort goes clearly towards tourism, with a 'patrimonialization' of the landscape and the cultural features.



Figure 8: *Source de Nefta (effet du soir)* [Spring of Nefta – evening effect – Mission of Commandant Roudaire during 1878-79 in Tunisia]. Source: BNF

This concern is also clear in the new strategy given to the Agriculture administration: preserving the 'oasian aspect'. An official very recent tendency is keen on a sensitization for the conservation of the biodiversity, after having fought for the monoculture of one commercial cultivar of palm date, the *deglet en-nûr*. Considering only the official actor, it is a revolution; one can also suggest a sensitization (in particular under the pressure of the international organizations) for the 'relativist' resources. In the plantations organized by the State, the directive would be henceforth to have a maximum ratio of 70% in *deglet en-nûr* (instead today 100%). The objective is to try to preserve the diversity of the Tunisian cultivars, in case the catastrophe scenario comes true: the *Bayoud* (a cryptogamic disease that ravaged Moroccan and Algerian palm groves) goes through the Algerian border, and devastates the Tunisian oases.

Therefore, one can preserve at least the aspect of oasis even without an (exportable) date production for both the subjacent cultures and tourism (it seems proven indeed that the resiliency of an ecosystem is higher as its biodiversity is high).

Beyond the natural landscape, tourism has an efficient role in the arrangement of the settlements. In Tozeur, the municipality decided that the local mud brick is *the* 'authentic' feature of the traditional settlement: al-Hadawif, the most remarkable area in the old town, is actually made of local yellow mud bricks, but other parts of the old town, even older, are made of a different technique (area of Zebda for instance: Puig 2000). But as usual, the best for tourism is to define the simplest visual identity, as for marketing: the mud brick has been widely spread everywhere in the tourist town circuit, to the extent that even some mud brick walls were built to hide non conform architectures along main pathways. An architect, as early as 1991 (Abachi 1991), was able to talk about a "folklorization of the space", and underlined later (2000) the refusal of the inhabitants to get involved in such an 'expression type' of their local identity.

In Egypt, the nearly same process occurs in Siwa oasis. In two decades, Siwa witnessed significant changes on the organization of its habitat (Battesti 2006a). While a radical change of the space distribution of the domestic units took place, the materials massively passed from a salty mud clay mortar to the squared calcareous gypsum, inducing an also fast evolution of the techniques of construction. Although these two materials are of local origin and production, the shift from one to the other is not without incidence on the design of the habitat and the social uses of the dwelling. The argillaceous material seems to be taken back in affection by new promoters of the 'tradition' (political and commercial). These actors thus invent the traditional style of Siwa by posing clay as object of reconsideration; the 'salty mud' has been chosen to give a visual identity to Siwa, as a marker of the 'traditional' for tourism purposes, with a quite coercive action of the Governorate by the way.

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## Conclusion...

Oases are artificial landscapes shaped by local people and environment conditions, but they are also shaped very concretely by external ideas, values, expectations, and, at this respect, tourism has a major and decisive action, even stronger these last years. The landscapes desired by tourism, compatible with the icon of the timeless 'oasis', finally become more and more, with no surprise, a marketing feature presented as simple as possible: tourism is shaping the oasis landscape at its image.

Inversing the usual process — by accommodating the reality according to the copy — is not fully a new idea. Descola (2007) noticed first that two different tales of Edgar Allan Poe present this same reversal: *The Domain of Arnheim* and *Landor's Cottage*. In the two stories, protagonists come into a piece of nature (a large domain in the first, a secret valley in the State of New York in the second) and dedicate themselves to landscape their environment, to smooth it, to transform it in order it becomes a real... landscape, a succession of sceneries, the illusion of a real Romantic painting, perhaps one of the Hudson River School we can see at the Metropolitan Museum of Art...

Saying that the local people shaped their own oasian environment is obviously a truism. But the relevant scale of space for the cognizant activities of a gardener is his own garden. This large spatial scale is the level of individual mastering on the nature; the smaller is the spatial scale of change, the bigger is the required community, but also the bigger is the involved step of time. (Battesti and Puig 1999) That means the general landscape of oases is obviously of anthropic origin, but at this scale, it is the result of the 'history digestion'. How can we understand then the reshaping of oasian landscapes by/for tourism?

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