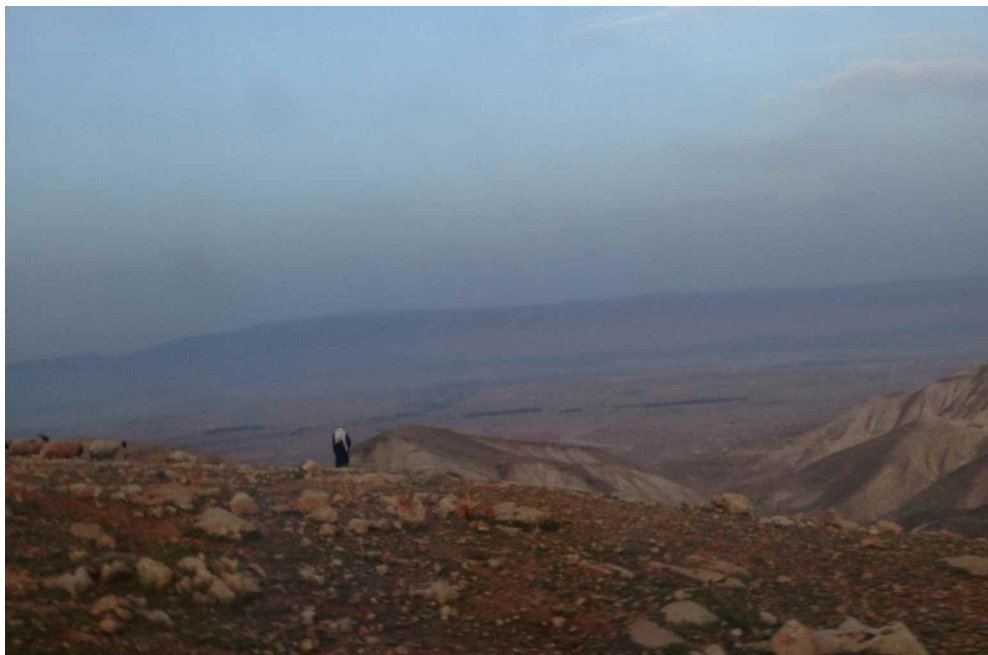


# The Power of the Palestinian landscape

An exploratory study of the functions of power using  
aerial image interpretation

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June 2016  
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## **Abstract**

The Palestinian region is changing rapidly, with both economic and cultural consequences. One way of approaching this very political process is thru the concept of landscape. By viewing the region as a multiprocessual, dynamic landscape the analysis allows for a holistic read where historical and contemporary projections, interpretations and notions of power are fused. This thesis draws on the scholarly fields of humanistic landscape research and aerial image interpretation as well as theories of orientalism and power. A case study of two regions of the West Bank is performed; interviews and observations provide localized knowledge that is then used in open-access image interpretation. By performing image interpretations this thesis explores the power embedded in mapping and the possible inclinations the development towards open-access geospatial analytic tools could have on the functions of power in the Palestinian landscape. By investigating the spatial configuration of the Palestinian landscape and tracing its roots this thesis finds four major themes that are particularly pivotal in the processual change of the Palestinian landscape: the Israeli/Palestinian time-space, the blurring of the conflict, the dynamics of the frontier region and the orientalist gaze.

Language: English

**Keywords:** landscape, Foucault, orientalism, power, Palestine, the West Bank, image interpretation.

Adolfsson, J. (2016) The Power of the Palestinian landscape: an exploratory study of the functions of power using aerial image interpretation.

## **Acknowledgment**

Writing this thesis has been an incredible experience. It has been both challenging and extremely rewarding. I am grateful for all the great and courageous people who made my field study in the West Bank possible.

My deepest gratitude goes out to first and foremost all the respondents who gave me their time and story, but also the people at PARC Agricultural Development Association and at Ma'an Development Center for arranging interviews, interpreting for me and driving me around the Palestinian landscape. This study would not have been possible without their assistance. I am also grateful for the time and support given by the Department of Geography at Birzeit University.

I would also like to express my gratitude to friends in Ramallah and Stockholm for helping, reading and inspiring.

Lastly, a huge thank you to my supervisor Anders Wästfelt for all encouragement, questioning and discussion thru out this project!

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# Introduction

The Israeli/Palestinian landscape is a complex nexus of war, projected dreams and struggle for power embedded in the soil. This thesis is an attempt to explore the relationship between landscape and power, by performing an empirical study of Palestinian farmers. The methods used in the Israeli occupation of the West Bank is a web of legal acrobatics, narratives, oppression and an orientalist gaze, all coming together in the transformation of the Palestinian land. Facilitating the transformative process was the classification of land, this too a manifestation of how power works thru soil. Following a logic based on colonial misreadings of the ancient Ottoman legal system, uncultivated land is considered as belonging to the state. In the last 50 years, this has become an important legal tool in the Israeli occupation, making the landscape a dynamic front where land use has come to determine national borders. The classification has also made it possible for the Israeli government to claim the dry, uncultivated hilltops as belonging to the state. Weizman (2007:4-8) claims that the pattern of occupation is unchartable by any conventional mapping technique and that the strategy always has followed the logic of creating an irresolvable geography by creating a situation too complex and illogical to make any territorial solution on the form of partition possible. Aerial mapping, conducted every two years, has been undertaken since the 1970s and are a most important tool in deciding which land is possible to build settlements on and not. The Palestinian landscape is vibrating with dynamics of power and never is the power as explicit as with the Israeli settlements on the West Bank hilltops. Several scholars have written on the positioning of the settlements; as reminders of power as well as physical barriers connected by roads, restricted or off-limit to Palestinian population (Weizman, 2007; Handel, 2014). The idea of power in landscape and architecture and the functions of it is based on a Foucauldian idea of visual dominance and invisible control. In the light of these statements, this thesis adds geospatial technology to the analysis of the functions of power. By drawing on ideas and theories presented in the scholarly field of image interpretation, GIS and knowledge inference this illustrates the changes in the landscape with satellite image interpretation. Inspired by the textual reading of landscape, image interpretation is widened in this thesis to also include landscape interpretation. Further, this thesis is an attempt to show how the interpretation of the Palestinian landscape generates preconceptions based on various orientalist, western, religious ideas, that causes the reader of the landscape to see a degraded, backwards, mismanaged land, treating it as such and thereby ignite the process of reshaping and remodeling it; creating power in a circular process always generating new interpretations and readings. Modern online technology for geospatial processing allows for each individual to interpret, analyze and depict changes in the landscape based on own knowledge. Can technology turn the gaze, and thus, turn the power?

## **Aim and Question**

The aim of this study is to shed light on the mechanism of power in landscape by combining the scholarly field of humanistic landscape research with theories of orientalism, power and aerial image

interpretation. The study is set in the context of the occupied West Bank, Palestine. By narrowing the field to the specific context I aim at adding the Middle Eastern context to the general field of landscape studies. With this thesis I will present empirical data on current land use in Palestine, explore the processes working to reshape it and trace these processes to their rooting and originating forces. Lastly, this is an abductive mixed method study where a combination of qualitative (observation and interviews) and image interpretations is jointly used.

I pose the question: How does power function in the Palestinian landscape?

A set of sub-questions is stipulated:

1. What are the spatial patterns of the Palestinian land use?
2. What are the main processes shaping the Palestinian landscape?
3. What are the strategies of the Palestinian farmers to cultivate their land?
4. How is power present in the Palestinian landscape?
5. How can available technology for spatial analysis effect the mechanism of power in landscape?

### **Limitations**

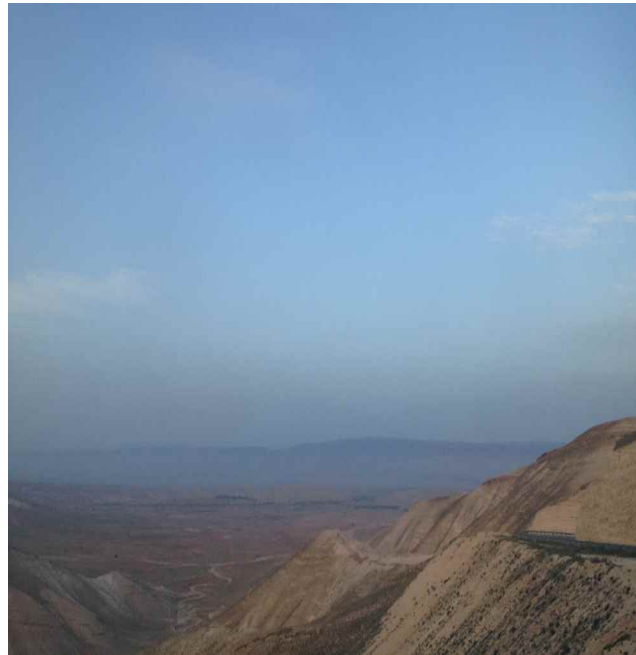
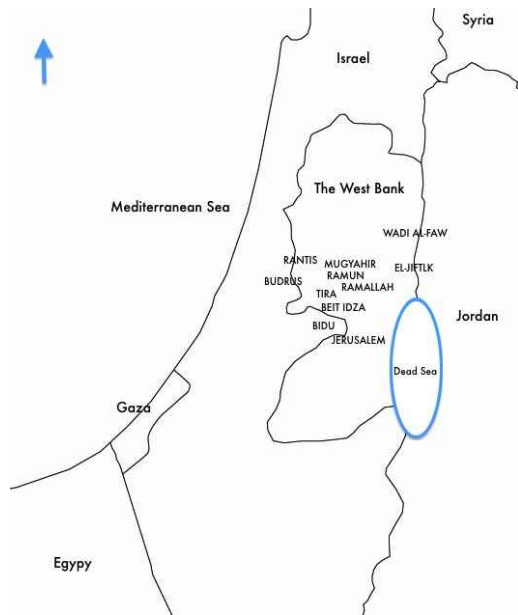
The choice of analytic lens means leaving some parts uncommented on. In the Background section I have briefly outlined political background, conflicts and borders. Facts are hard to find in a political context as intense and complex as the Israeli/Palestinian conflict but to the best of my knowledge I will use established information, as presented by the international community in providing the political background. I will not be discussing any agronomy related to the topic, nor will I further investigate the mechanisms of the economic market besides what is brought up by respondents. I will focus on the West Bank, leaving the situation in Gaza uncommented. This is an important issue but not fitting within the timeframe of a master's thesis. In this thesis I dichotomize Israel and Palestine. The ethnic situation and conflict is far more complex, but I made the judgement that it would not have been possible to frame in a master's thesis.

### **Geographical Scope**

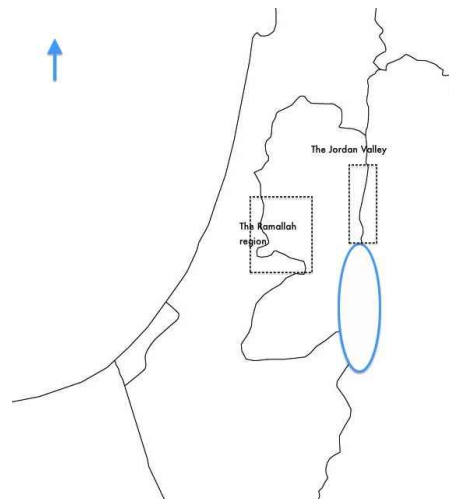
To gather the data I have conducted a four week field study in the West Bank, Palestine. I have gathered data in the form of interviews and observation from two locations: the south border region south-west of the city Ramallah, located 10 km north of Jerusalem, and the Jordan Valley. The findings of the study largely applies to the West Bank in general, but on certain points the findings are even more localized. This will be pointed out.

### **Images**

If source is not given, the image is taken during the field study in Palestine 2016 by Johanna Adolfsson.



The West Bank and the study regions



## Structure

The methodology and research design of this thesis is based on the understanding that historical processes and local intentions and ideas are mirrored in the spatial configurations of the landscape (Wästfelt, 2007a: 78). The introductory section of this thesis presents aims, questions and structure. It includes Academic scope; an introduction to the theories presented in the thesis and academic positioning. This is followed by Methodology, where questions of method, epistemology, ethics and critique is found; I present the two open-access tools for image analysis that will be used: Google Earth Engine and Choros Mapper. This is followed by Background where the physical features of the spatial configuration of the landscape is explained; borders, conflicts, zoning, land classification and spatial planning. The background section also includes a more investigatory section where theories of

power, orientalism and landscape are fused to explain the spatial configuration of the landscape from a more theoretically explorative perspective.

In this thesis I pose the question on how power functions in a landscape and what effects the newly accessible open-access geospatial technology could have. Therefore, first I have to establish what I mean when I speak about landscape and power. This is presented in Academic Scope. Second, I have to establish the functions, both technological and epistemological, of image interpretation, this is also found in Academic Scope. Third, I have to set the scene and explain the spatial features that could be of relevance to the current landscape; land ownership, planning, conflicts. This makes out my Background. I will then present my Results. A number of interviews have been conducted and I present these in a thematic fashion. In addition to the interviews, I will present two versions of image interpretation made following the knowledge I have obtained from literature studies and empirical data. Lastly, I will discuss my findings from the interviews and the produced images against the theory and make a few conclusions.

## Academic Scope

This is an exploratory thesis, where the use of satellite image interpretation is combined with theories of landscape and power. It uses the concept landscape because the concept opens up the possibility to talk about human and non-human interplay and processes. The landscape is agriculture and geology, but also a container of memory and social order; “to be absent from the natal landscape is to lose one’s moral bearings” in the words of Ashmore and Knapp (1999:16). Palang and Fry (2003:2) states without a tremble that there are four things to bear in mind when studying landscape: forms, function, processes and context (referencing Widgren, 2002). They can be studied separately but then one is not studying landscape. Following Widgren (2004, 2006) this study is designed as an attempt to fuse studies of landscape as power, social structure and symbology with critical and empirical materialist landscape studies. Academically, this is where this thesis finds its core. Inspiration is found from a wide set of theories in order to form an analytic lens; drawing on humanistic field of landscape research (Palang and Fry, 2003; Widgren, 2004, 2006; Olwig, 2002, 2005, Cosgrove and Daniel, 1989) intertwined with environmental orientalism (Said, 1999; Broich, 2003, Harris, 2014) and theories of the functions of power (Foucault, 1978) in relation to landscape and environment (Alatout, 2006; Weizman, 2007) to create an analytic tool for discussing the concept of power embedded in landscape. Seen in this light, a landscape is a multiprocess, constantly reinterpreted and recreated, while simultaneously holding its own endogenous agenda; moving, growing, eroding; it is *shaped by* and the *shaper of* notions of power. A theory of this kind is relevant in the Israeli/Palestinian context since the re-shaping of the landscape with land laws, spatial planning, architecture and (to a significant degree) “nature” functions as a tool to strengthen narratives of historical rights and contemporary claims. In the Israeli/Palestinian context forest, trees and “the blooming of the desert” were key actors in the Zionist movement of the 19th century (Wallach, 2011; Long, 2009; Falah, 1999) but it is also a key in the ongoing process of normalizing the occupation (Weizman, 2007;



Handel et al. 2008; Alatout, 2006), which is significant in the Israeli strategy of land dominance; the use of the landscape has relevance in legal processes and outcomes.

The larger field of humanistic landscape research hosts two branches that differs slightly from each other. The socio-cultural approach, as represented in this thesis by Cosgrove and Daniel (1989) Nazer (2008) Said (1999) Ashmore and Knapp (1999) and Heacock (1999), has been a dominant way of studying landscape in human geography since the mid-80s (Widgren, 2004; Olwig, 2005). With its postmodern emphasis on the representational, pictorial, aspect of landscape inspired by the art-historian ways of iconography, dealing with the landscape as subjectively perceived; invested with emotions and memories. However, also represented are Olwig (2002, 2005) and Olwig and Mitchell (2009) commenting on landscape as a recreating process of law, custom and traditions and Widgren (2004, 2006), arguing for a more substantive, materially reading; a structured approach. Further, Cosgrove (2003:15) identifies a divide in landscape research between what he labels as the ecological discourse (geomorphology, biology) and the semiotic discourse (process based where meaning is mediated thru symbology). This thesis largely aligns with the semiotic discourse: the physical features in this thesis are interpreted as symbols and mediators of power. However, the empirical research is within the realm of the physical features, thus stretching towards a materialistic interpretation as argued by Widgren (2006) - echoing theories on social space in image interpretation.

Framing the above theories is a theory of satellite image interpretation in social science, where a way of relating to satellite images by assuming a social relational space, rather than an absolute (Wästfelt, 2007a) opens up for a possibility to discuss the recent phenomenon of online geoprocessing platforms in relation to theories of power and landscape. It thus approaches the research question with a dual epistemology; one that assumes a world mediated thru signs dependent on interpretation and one that assumes a reality where the features can be measured and classified. The traditional conceptualization of space in GIS and remote sensing is absolute, rooted in a positivist, law-seeking methodology. Well into the 1990s, the fields of human geography and GIS were miles apart (Schuurman, 2004; Hazigüzzeller, 2012). Current discussions on the use of multiple epistemologies is possible only after the power oriented scholarly fields of feminist, participatory and critical GIS has decoupled certain links between epistemology and methodology (Elmwood and Cope, 2009). In order to generate meaning from a satellite image there is a need to have knowledge about the spatial configuration of the landscape visible in the image. Visible in a satellite image is the reflection from vegetation and physical features, however what *isn't* visible is ideas, laws, social order, memories, all taking part in creating the spatial configuration. In the terminology of Widgren (2004, 2006) visible is form but not function. Thus, to use satellite images in an analysis of landscape as a social space, contextual knowledge is necessary (Wästfelt, 2007a; Wästfelt, 2015; Wästfelt et al., 2012; Ahlqvist et al, 2012; Howarth, 2008; Couclelis, 2009). Take a look at image 1: for someone unfamiliar with the Palestinian landscape, even with a highly resolved image it is impossible to tell road 425 Sderot Ha'arel from the recently completed separation wall. Take a look at image 2: zooming out, it is probably possible to tell the structure of the road from the structure of the wall, even with limited contextual knowledge. Only

by seeing the context: the settlement, the meandering shape, the length, can someone interpret the spatial signature. The form is visible but the function is not. Even further; is it enough to know that it is a wall, if I don't also know that it is a “separation” wall? No. Only by knowing for whom it is porous and for whom it is clogged can I fully grasp the function and the effect it has on the structures of power. I need to know *why* it was built, in order not to interpret it as a road. Important too is the fact that the function is subjective: it provides safety and freedom to some, and it takes it away from others. The function, thus, is relational; it is produced by the various subjective readings and usages of it. Approaching the image as a relational space could be a way to reveal otherwise invisible power; a way to differentiate between the gray wall and the gray road<sup>1</sup>. Further, the *accessibility* of the online open-access image interpretation platforms used in this thesis (Choros Mapper and Google Earth Engine Express) potentially causes a shift in who can measure, classify and interpret a scene or a sequence of event. Following the logic outlined in the theoretical section, the two scholarly fields of landscape and image interpretation are intertwined in a dual way: 1. In order to fully grasp a landscape one needs to know the function, process and context behind the visible forms; in order to identify subtle differences in the spectral signatures one needs localized knowledge of context and agency, i.e. a relational space. 2. Interpreting and depicting a landscape holds power and is a constituting process of the organization of the same landscape, therefore the newly accessible platforms for geoprocessing, by multiplying depicted relational spaces, could potentially skew the traditional functioning of a powered landscape.



Image 1. Road 425 Sderot Ha'Rel and the Wall (north-east line)

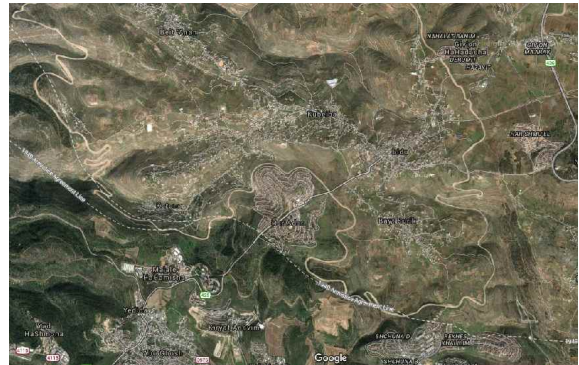


Image 2. The Wall meanders thru the landscape.

## Concepts

### Foucaultian power

“Foucaultian” is an adjective frequently used by me in this thesis. When using this phrase I refer to the idea of how power functions, not as a straight line from the government and down but rather as a

<sup>1</sup> Notice also the darker shade of green on the south-west corner of the image and recall above theory on forest planted over former Palestinian villages, in the war of 1948. A cross check with the online map Inakba shows that the area in fact did host a large number of Palestinian villages. <http://zochrot.org/en/site/nakbaMap>

performance between the citizens. This function of power is a scattered disciplinary system, where the main form of discipline, and thus power, is performed by constant, unpredictable and invisible surveillance. Discipline rests in the gathering of information, in the catalogues and categories. It is a type of power where the mechanisms of control have dispersed from the single upholder of rules to instead be the normal. Foucault (1978) exemplifies with the invention of the police in seventeenth century France, where the King's power was multiplied and transferred to the new force of control. Foucault (1978) makes a distinction between territorial and non-territorial forms of control, and exemplifies using on the one hand the leper colony where the infected town was spatially separated, with the plague stricken towns, where the disease was kept in shape and prevented from being spread by a register of the citizen and a man walking the streets, howling the name of every citizen and awaiting their reply from the window, thus making sure no sick people wandered around. The difference between the two is the general seclusion of leprosy versus the individual sickness of the plague. With institutions like hospitals, mental facilities, prisons, a general territory is created but its selection is still individualized! This is partly done by using the dualism of categories: healthy/sick, dangerous/harmless, good/bad (Foucault, 1978:199). With a society that has increased possibilities of measuring, counting and indexing, this functions of institutions is dispersed and multiplied. One of the most often cited idea is the one of panopticism, of which the above division of power is a foundation. The Panopticon is an architectural model of the theory, created by the English philosopher Jeremy Bentham in the late 18th century. The idea of the building is a penitentiary system where control is exercised by visibility: inmates are placed in ring shaped building and a centralized watchtower is constantly surveilling them. Large windows are placed on both sides of the inmate's cell, causing the sunlight to immediately reveal their position. A key idea of the panopticism is that the surveillance (the power) is unverifiable and exercised without regularity. The inmates cannot see the surveiller. Many things can be drawn from the panoptic theory, but most relevant in this thesis is the multiple functioning of power as both an intangible surveillance and of physical means. The way the power multiplies and scatters out of the institutions and becomes the norm of society, performed by everyone, does not contradict the physical form of discipline and power in the form of state institutions (i.e. prisons) but in the word of Foucault (1980:73) it often upholds it more effectively.

## Landscape

### *Semantics, concepts, and connotations*

Intrinsic in the concept *landscape* is a sense of detachment from one's surrounding (Olwig, 2005) making is more likely that I would recognize the fields surrounding my summer house as landscape, rather than the forest and lakes surrounding my apartment. Given the need for a detached, outsider's gaze it is not very surprising that the concept's pivotal point is the western, early industrialized world. The focus on northern Europe, United Kingdom and America in the landscape concept tracing (Ashmore and Knapp, 1999; Olwig, 2005) makes the literature applicable in a Middle Eastern context with some caution. As a side note it is also worth to notice that with a few exceptions, my main sources are male.

Semantically, the word landscape has various meanings, but originated as a concept in 16th century northern Europe (Knapp and Ashmore, 1999; Olwig, 1996, Olwig, 2005) as part of the new form of artistic expression: landscape art. The word was later exported to the English language. In a northern European context (German, Dutch, Swedish) the word has connotations to territory, community and customary laws based on the use of the land (Olwig, 1996, 2005). The German word *landshaft* could in some contexts refer to the population represented in the parliament, sometimes the parliament itself and sometimes as distinguished from the nobility or clergy. In the latter case, the use resembles the English equivalent commoner, represented in House of Commons (Olwig, 1996). Landscape in a British context usually refers to “place” (as a lived version of space) whereas in both a North American and a Palestinian context the word landscape usually means natural scenery, scenery or beautiful scenery (Nazer, 2008:46). T

Landscapes embody multiple times as well as multiple places (Ashmore and Knapp, 1999:18). In the northern European sense, the concept of landscape was tightly connected to the concept of customary law, rooted in a usage of the land for “time out of mind”. Customary use created customary laws that was directly derived from the use of the soils but when formalized or interpreted by a political entity (a thing, a parliament etc.) also created the future landscape, i.e. it transformed into traditions (Olwig, 2005). During the 16th century battles for territorial hegemony/unity as opposed to a decentralized feudal society prevailed in northern Europe. It had tight connection to the symbolic meaning of customary law versus natural law. The concept of natural law was put forward by the unionist (i.e. kings) as connected to ideas of neutrality, measurability, universalism - something eternally right and true, everywhere. In this strand of thoughts, the concept of customary law was connected to arbitrary local rules - and local, non-valid feudal rulers. As Olwig (2005) shows, the development of the legal system had much to do with the development of united kingdoms. At the same time, there was a search for a legal system to counter the universal power of the kings as well as the Catholic church and its written law, that turned the interest of the 16th century people to the tradition of customary law, rooted in time out of mind. This system was perceived as being more true and natural than the written law, created in its contemporary context. It was also a sign of general interest in the natural history of a region. During this time, a tradition of territorial identity was formed, connected to the romanticized ideas of a natural landscape and a people belonging to its soil (Olwig, 1996). However, as stated above, the difference between traditions and customs is that the latter changes with time. As we shall see in the Palestinian context, time is of essence and the variation of how time is conceptualized will have important consequences.

### *Landscape a concept in Palestine*

The two Arabic words meaning landscape are Al Manthar och Al Mashhad, both derived from different words for the verb to See. Al Manthar stems from the verb Natar, meaning seeing from an elevated top, leaning towards the word View. Al Mashhad stems from the verb Shahada, and has a second meaning in the word for Scene or Scenery. In this latter case, the word for landscapes gives associations to the landscape being the scene for interaction, be it human or non-human (Nazer, 2008:47). For the local Palestinian context I’m drawing on texts that investigate the Middle Eastern

concept of landscape as an oriental or exiled construct (Said, 1999; Harris, 2014; Bowman, 1999), the transformation, forced stagnation or representation of the holy landscape as an actor in creating future dominance (Falah, 1999; Said, 1999; Harris, 2014; Alatout, 2006; Long, 2009; Matar, 1999) as well as texts that question the notion of representation as dominance entirely (Wallach, 2011). The latter used the above mentioned iconography to unveil the symbology of the contesting, mirrored maps of Israel/Palestine. When discussing landscape in the local context I'm using an analytic lens of orientalism and its imaginative geographies - be it the way the map is presented (Matar, 1999), the way the water politics is made out (Broich, 2013) or the way land laws are interpreted (Weizman, 2007; Nadan, 2003; Kamel, 2014). A feature standing out from the literature on the Palestinian landscape is time. The time-space conditions are extraordinary. In general, time-space is focused on as separate parameters, where the one is fixed and the other dynamic but the interface of the two is actually essential for understanding the changing landscape (Palang and Fry, 2003; Swensen, 2003:274). Very much so in the Palestinian context where the rigidity of time, often connected to conceptions of the land as Holy, have had consequences such as Palestinians being perceived as if existing in a parallel time, where development doesn't exist (Broich, 2003:266; Matar, 1999). Another particularity of the Palestinian landscape is the constant dynamics of the border regions, where the separation barrier follows piece by piece land seizure, by slowly and methodically fencing in the illegal settlements (image 3). The fenced in settlements of the border region with designated roads creates a particular *frontier landscape* (Handel, 2014) with the separation wall following close is its shadow, eating up land from the outside.

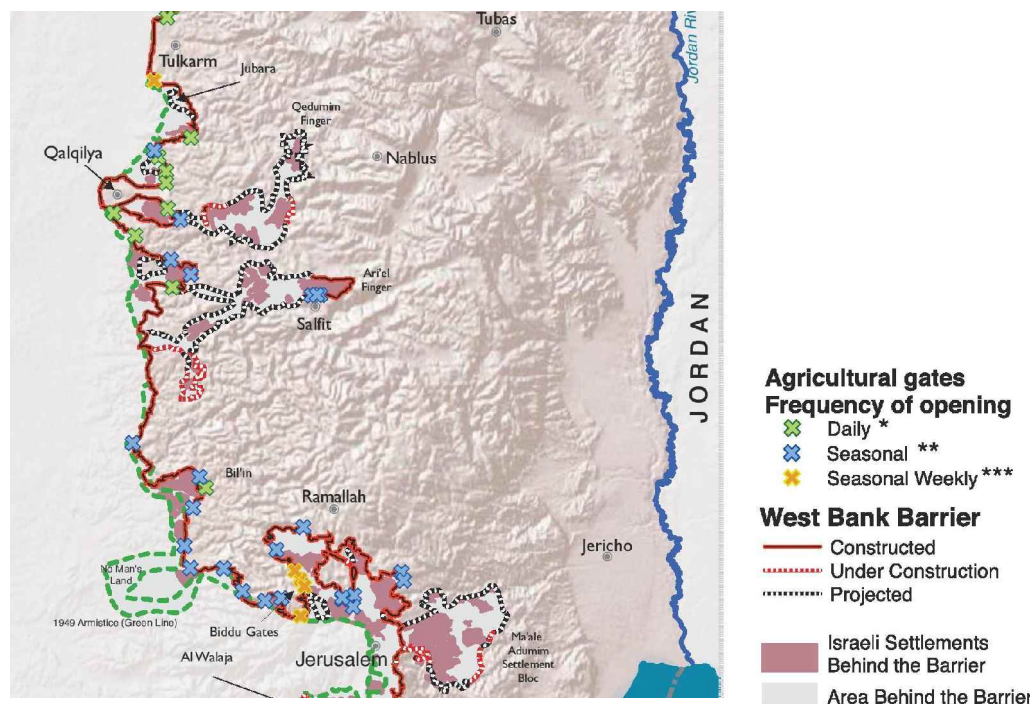


Image 3. The wall follows the settlements (OCHA, 2011)

## Orientalism

Orientalism is a concept coined by Palestinian born scholar Edward Said, whose most notable work is

the book *Orientalism*, published 1978. The concept captures how the West defines the “Orient” as a pre-defined geographic entity with an intrinsic cultural characteristic. The concept is intimately linked to the scholarly field of post-colonialism (eg. Spivak, 1988) where one of the key concepts is that of the “unmapping” and “rewriting”, refusing colonial categories (Harris, 2014:803) of the world that is constantly described by an outside, western gaze (Said, 2000). Said (1999) is also present in this thesis with a more recent text on the Palestinian landscape. In short, the concept deals with the colonial construct of an “orient” as the opposite of the “occident”, or the West. In fact, there is a dual exchange, where the concept of the orient “other” creates the modern West citizen. This concept is used in this thesis to capture western description, depiction and development schemes in the Palestinian region. One of the clearer examples is how the western gaze at the orient (i.e. the *orientalist* gaze), holds the perception of the Arab as inherently traditional and undeveloped, was contrasted to the Jews, who in the same school of thought had received the modernization and drive for development from their long time in Europe (Broich, 2003). The western gaze physically altered the Palestinian landscape by this binary understanding of east and west by designing the system of irrigation according to it – a matter I will have reason to return to. Underpinning the idea of the undeveloped arab is another idea connected to the orientalist western gaze: the idea of a space fixed in time, a mummified landscape.

#### Cartography: background, GIS and open-access mapping

Cartography is the basis of modern day GIS technology and is thus underpinning the above theories of image interpretation. Further, cartography, the measuring and depicting of the physical ground, has strong ties to the centralization of the nation state thru the cadastral mapping of land within the nation's realm (Wästfelt, 2007b, Schnell and Leuenberger, 2006). The modern distinction between geographic, projected maps and decorative maps with mythological or symbolical figures are a relatively recent phenomenon. Instead, common was to combine perspectives to capture as much of a place as possible, with multiple images next to each other (Eriksson, 2007). However, the knowledge on geographical maps placed within a coordinate system was developed already 150 AD by the ancient greek Ptolemy, but forgotten by the West with the fall of the Roman Empire (Wästfelt, 2007b). Thru the publication of the ambitious cartographic project *Theatrum Orbis Terrarum* by map collector Abraham Ortelius (1527-1598) the European renaissance rediscovered the geographically measured, large-scale cartography where the depicted places were not primarily drawn in relation to each other, but based on a flat projection, thus not using the central perspective (Matar, 1999, Wästfelt, 2007b). Inventions such as the magnetic compass and scaled representation revolutionized the large-scale cartography. At the turn of the 16<sup>th</sup>/17<sup>th</sup> century the method of cadastral, geometric cartography emerged as a mapping technique. It was a new way to keep an eye on the land of the nation and thus collect taxes accordingly (Wästfelt, 2007b; Schnell and Leuenberger, 2014).

Although, the political questioning of the role of the map is not new but has actually been present thru out the development of cartography (Crampton and Krygier, 2006:12), in the late 1980s, the field of critical cartography emerged as an academic field and has a discourse raised the issue of

power embedded in mapping and cartography (Crampton and Krygier, 2006) Wood, 2010; Wood and Fels, 2008). The poststructural reading of maps as social signs (Schnell and Leuenberger, 2014) assumes a socio-political context and sees the map as social if not political document. The way map holds power is phrased in different ways: as an exercise of *external* power in the sense that someone needs certain economic and social prerequisites to undertake mapping and *internal* in the Foucaultian understanding of surveillance and de-individualised discipline (Harley, 1989 in Wästfelt, 2007b:21); as active constructor of power (Crampton and Krygier, 2006:15); as a gaze that is not mapping subjects, but coding subjects and produces identities (Pickles 2004:12) or as imperial (Cosgrove, 1994; Matar, 1999, Schnell and Leuenberger, 2014). UK scholar Wallach (2011) counters this discourse slightly, and argues for a de-territorialized reading of the map, where a possible interpretation of the map is that of memory and emotions rather than that of sovereign claim of territory. The perspective has relevance in the reading of the Palestinian landscape and the functioning of architecture, spatial structure and symbols of power. True is that both nations depict the same country without borders on coffee cups, t-shirts and beach towels but also on tourist maps, weather maps and in atlases. This is easily read as territorial claim, following the logic otherwise outlined in this section of theory where focus is on surveillance, interpretation, and mapping as a way for power to function. Keeping the de-territorialized reading in mind might push the senses to a more nuanced analysis of the material. This is not to say I disregard the power that *may* be embedded in cartography and mapping. After all, the mapping technology is more or less the emblem for the Foucauldian panopticism<sup>2</sup>.

Related to the Palestinian context Maitland (2013) describes how Palestine is largely unknown *in* Google Maps, with barely no street names visible compared to adjacent Israeli settlements, but is very visible *to* Google Maps. In 2013 the company changed from Palestinian Territories (an Israeli label) to Palestine, causing an infected conflict with Israel's Deputy Foreign Minister. The lack of street names is most likely a consequence of lack of data sharing between Google and the Palestinian Authorities (Maitland, 2013) but it does however give the signal of a very rural country.

Noteworthy in this thesis is the note made by Crampton and Krygier (2006) that the field of critical cartography has had very little explicit impact on the emerging field of open-access cartographic tools that are used in this thesis. Even though the tools themselves are used in critical cartography, and associated tech-field critical GIS, developers of technologies rarely if ever refer to the cartographic academic field. Schnell and Leuenberger (2014) relates the emerging and spreading of open-access maps to a neoliberal economy, increasingly used by NGOs and interest groups to disseminate a geopolitical claim. They further advocates that to understand the political impact of a map, a national discourse needs to be established. They exemplify what they label as "people's cartography" with the Israeli/Palestinian context where a proliferation of maps has created a set of sub-genres, each pertaining to its own geopolitical claims; the governmental cadastral mapping as nation-state taxation, surveillance and control, the NGO's polemic maps using a scientific interface

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<sup>2</sup> Although never explicitly commented on in this way by Foucault (Wood, 2010:264). On a side note, when Foucault speaks of landscape, he means in the simply pictorial way (Foucault, 1980:69)



while including or excluding data as needed claiming space. Although maps are read and used as a political or social tool by most, they simultaneously holds a peculiar claim of neutrality, making them even more powerful political tools (Schnell and Leuenberger, 2014).

In depicting the landscape, using the “peoples cartography” (Crampton and Krygier, 2006) available thru Google Earth Engine and Choros Mapper, I am mimicking the tradition of landscape art, letting the image reveal social order. Both technologies, and associated methodologies, has the physical features of the landscape as basemap, but the shaping of the patterns is done based on my localized knowledge. Using Google Earth Engine Explorer, I make the sample choices and what I chose to categorize or not makes all the difference. Using Choros Mapper I make the choice of deciding on how many pixels surrounding each pixel will play a part in determining context. I use the methodology of trial and error until the map reveals the pattern I have observed and have been told of by respondents. In the contextual segmentation of Choros Mapper, the constant movement of pixels from one year to another, depending on how the spatial structure changes, makes an absolute comparison between each picture impossible. They can however serve as a measurement of probability, placed next to the other sources of data. Then, what are the theoretical gain in performing such an image interpretation? The answer is two-fold and the first point is already made above: it tests the socio-constructivist and iconographical theories of landscape and the meaning of depicting and interpreting a landscape. By interpreting the landscape, I am partaking in the ongoing process of shaping it. Second, and related: by testing two open-access processing platforms I shed a light on how accessible the geospatial information is and how it thus can be used in a revolutionary way to describe one’s own landscape and experiences. This is interesting when analyzed using theories of spatial power in a landscape exemplified by the panoptical hilltop settlements, related to the internal control performed by the cadastral map (Harley, 1989). The online platforms turns the gaze. Another interesting feature of the satellite/aerial imagery is the sudden availability for people to access uncategorised images of their landscape. Following the theories by Wallach (2011) and Harris (2014), the drawing of lines (be it on a map or building a fence) changes the claim of *land* in a wide sense - including emotion, memories, future and past - to a limited claim of a restricted, demarcated piece of land. Remember also the Israeli fear during the Oslo process of fortification of the Palestinian idea of a nation state with the new political Oslo lines. Thus, having available satellite or aerial images where political borders are not visible could possible change the perception of one’s territory. Following the environmental narrative theories of Alatout (2013) there is a tight connection of territorial understanding and understanding of power. Thus, the images have the potential of skewing the functions of power in the landscape.

## Methodology

### Mixed methods

The way of inference in this study is best described as abduction (i.e. Svennevig, 2001): adding up sources to an analytic lens which is one among other possible analytic lenses; not proving or



falsifying, but coming up with the best possible explanation and ideas (Howarth, 2008:64). This study is based on a mixed method approach where qualitative data is paired with image analysis, co-working to reach as much depth as possible when answering the questions posed in this thesis. Choosing a mixed method approach was not necessary; the stipulated questions would have been possible to answer using one or the other. I made the choice based on a belief that a mixed method approach would enrich the results. The methodology functioned as triangulation (Bryman, 2012) in allowing me to gather data in the form of interviews and observation and later trace these using open-access geospatial processing (Choros Mapper and Google Earth Engine Express). The tracing has the benefits of simultaneously allowing me to discuss image analysis and knowledge inference. The processing is conducted in such a way, that only by localized knowledge of the spatial ordering of the ground can I find and interpret the patterns; only by knowing what I search for I can find it. This abductive methodology is by its nature *not certain*, it does not, as deduction do, falsify a hypothesis. Instead, it is *productive*, because it produces new ideas beyond the context set up for the hypothesis; it does this by asking what the most probable explanation for an observation might be (Svennevig, 2001). This means that I don't claim the images to be falsifiable, they are to be viewed as an extension of the qualitative data. The risk with mixed methods is that the material is growing too big and that lesser focus is paid to details (Bryman, 2012). I have been aware of this danger and have tried to counter it. Following Bryman (2012) I have not been thinking of the two as separate components but instead as an integrated process thru data gathering, presentation and analysis. Bryman (2012) also urges for an even more thoroughly planned research design and awareness of limitations of time and resources. I followed this advice and planned for a four week field trip, which allowed me to have time for the geospatial analysis. This caused me to be efficient and to the point in my interviews and field trips. I kept the respondents down to a minimum. After a number of interviews I reached the point described by Kvale (1997:98) as a saturation point; a moment where the stories given are similar to the point that no more new information can be absorbed.

## **Qualitative**

The qualitative gathering of data has consisted of interviews (field, group, preparatory) and observation. I have interviewed people working as farmers (agriculture and herding) as well as people working in organizations relating to farming. I chose to target the group related to farming since they are an active force of the re-working of the landscape.

### Preparatory interviews

The preparatory interviews were undertaken in the offices of the main organizations Ma'an Development Center; PARC Agricultural Development Association and Al-Nahda Association for Developing Rural Community. A set of basic questions was prepared: 1. Background to the organization (establishment, field of focus, projects, co-partners), 2. Current situation and challenges in the region and 3. Actions (what is done, how, why, with what hope). Interviews were recorded and transcribed when possible, on two occasions the audio recording is disturbed by frequent sound from

the outside street. When not possible, the interviews were simply recorded by note taking. Each interview took approximately 1 hour.

### Field interview

Two interviews were conducted in the field, i.e. visiting the farmers' land. These two followed a topic guide and were facilitated by a well-connected interpreter/facilitator who had a long-standing relationship with the respondents, i.e. functioned as a gatekeeper (McDowell, 2010). The topic guide covered the following: how is the land currently used, has any change occurred, what are the challenges, what are the strategies for continuous land use. They were not taped. I made the decision not to tape them because I judged the dynamic in the group to be better with a more free flowing conversation. The first of the two interviews represented the location El-Jiftlik in the Jordan Valley. The interview was conducted in a greenhouse. Present at the interview were the female respondent, a male family member of unclear status, a child, the facilitator and me. The second of the two interviews represented a Bedouin village, also in the Jordan Valley, near by the settlement Maskiyot. The name will not be given since it would identify the family. The interview was conducted in the home of the family, a large tent. Present at the interview were the female respondent, her husband, four children, the facilitator and me. In addition, a male, former politician for the Fatah party was interviewed on the current situation for the local market. The interview was conducted in his house. Each interview took approximately 1 hour.

### Group interview

One group interview was conducted representing the Ramallah region. Eight farmers and one interpreter/facilitator were present. The interview was held at the PARC main office in Ramallah. Farmers represent villages Ramun, Mughayir, Budrus, Rantis, Bidu, Tira and Beit Ilse (see image p. 6). All have land in Area C. Two of them, farmer 3 from Rantis and farmer 5 from Budrus have land in Area C but live in Area A or B. Respondents were all male. Each farmer presented their village and their case. The interview followed the same topic guide as the field interviews: how is the land currently used, has any change occurred, what are the challenges, what are the strategies for continuous land use. The interview was taped and the English translation transcribed. An interview question was posed to the group, individual questions as exception, and a discussion followed with in the group. The discussion was then translated to me. Total time of interview: 1 hour 30 min.

### Observation

I conducted active observation on various field trips: to Jerusalem, Tel-Aviv, Bethlehem, Jericho and the villages surrounding Ramallah. I went on a hike along the Wadi Qelt stream in the Jericho desert region, on a field trip with the Ramallah Museum and Department of Biology (Birzeit University), observation trips with Ma'an and PARC organizations, a meeting on refugee camp architecture with DAAR architecture firm and the Campus in Camps<sup>3</sup> project in Bethlehem as well as several tours on

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<sup>3</sup> Campus in Camps is an experimental educational form developed in the refugee camp in Bethlehem. The project aims at creating a meeting space between the camps and the university campuses. Their main objective is to decolonize knowledge produced in the camps, on the conflict

my own. During the trips as well as in my everyday life I kept an on-going dialogue on the current political situation. I shared a flat with two Palestinians in my own age.

### **Image interpretation**

I have added to my analysis a set of classified satellite images over the visited areas. The localized knowledge I have received by literature studies, interviews and field observation will allow me to infer additional knowledge from the processed images. In this section I am inspired by the scholarly field of GIS and the formalization in a GIS of localized knowledge and space as social space (see p. 13). I have used two online based platforms as analytic software: Google Earth Engine Express and Choros Mapper. In this thesis I use the label “open-access” a bit more widely than is usual. The word usually refers to unrestricted access, this is the case with Google Earth Engine but not with Choros Mapper. However, Choros Mapper has a limited free online version which makes it acceptable to use the term open-access.

Google Earth Engine is a cloud based service provided by Google, free of charge. Among other things, the service has made available every Landsat scene from 1999 to 2014. The Google Earth Engine requires a little knowledge in coding. However, they have also provided the user with an easier more automated tool, Google Earth Engine Explorer, and it is this tool that I have used in my analysis. A Landsat scene (Landsat TOA Percentile Composite) provided as base map and using polygons and points test areas are assigned to each desired form of land use. A number of different algorithms for classification is available. Thru testing I concluded that the one providing best results in my regions are Voting SVM; an acronym for Support Vector Classification (Hsu et al., 2010). Thru a process of trial and error, I performed a classification over the villages from the year of 2000, when the first images of the area are available. After the classification had been performed, Landsat scenes from 2005 and 2014 replaced the one from 2000 and the classification was repeated, using the same polygons. This way, the pictures are possible to compare over time. The classification is based on per-pixel, spectral information.

Choros Mapper is a semi-automated online platform, based on research (i.e. Wästfelt, 2015; Nielsen & Ahlqvist, 2014; Nielsen et al. 2014) where the image classification process consists of an initial spectral classification and the additional *contextual* segmentation of the image. The parameters for the context is set by the user: classes, smoothness and radius. The radius parameter is the one controlling how many pixels surrounding the single pixel will be part of the calculation. The contextual segmentation thus recognizes surrounding as part of classification. However, since the surrounding changes with each year the pictures are not possible to compare with an absolute space in mind. They can, however, provide an *idea*, supported by localized knowledge. The localized knowledge is supported by aerial photos provided by Birzeit university, the interactive online map showing political deviation provided by B'tselem as well as the details aerial photos provided by Google Maps and Google Earth. The images classified using Choros Mapper are satellite images retrieved from Google Earth. I made this choice because it made the images manageable in size while still providing sufficient patterns. The images are chosen to be as close in time as possible to the

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and the Palestinian situation.

above mentioned timeline 2000-2005-2014. For El-Jiftlik that meant 2003 and 2010, for south Ramallah region it meant 2003 and 2015. Only two images were chosen for the contextual analysis since a comparison is not valid between the images.

### **Reflection and Critique**

My initial methodological aim has been to combine theories of power in the landscape with relational GIS-analysis as described by Wästfelt (2009, 2015), Ahlqvist, Wästfelt and Nielsen (2011) and Nielsen (2014). During the course of the study I revised this aim slightly, moving from technical analysis to a more theory based, exploratory interpretation. I did this to better match the theories of gaze, interpretation and power; I kept the underpinning theories and reasoning as a frame for the study combined with theories of cartography. I have also chosen to make image analysis, but have turned the focus towards open-access, online geoprocessing tools. Choros Mapper, is based on above mentioned research, but in a semi-automated way. The other, Google Earth Engine, is not based on a relational concept of space. It is relevant, however, since I have used my initial knowledge based on interviews to conduct the analysis. In that way it is connected to the epistemology of this thesis; where the world is analyzed thru what I know of it. The analyzed images are thus to be viewed as illustrations of theory and results, rather than independent data.

Additionally, on location in Palestine my initial field design had to be slightly revised. I had plan to undertake thorough studies of land use of several specific locations using interviews and transect walks. This plan was not possible to implement. The West Bank is a torn region under tremendous pressure. To ask for the time of people and not being able to guarantee help or even tangible results demanded a large degree of pragmatism from my side. I had to meet the need of the respondents and let the interviews follow the line of their interest. Much happened before and after interviews. Accessibility was also a factor: moving around in the politically patchy landscape that is the West Bank is unpredictable and sometimes time consuming. Check-points can close at any time, causing the trip to be three-four hours longer than scheduled for. This meant that the trips organized for me largely followed the tasks already planned for. The interpreter was with both Ma'an and PARC a field worker whom I was given permission to join. The field worker took me to special places after my request but I was very much in the hand of the organizations. However, instead of transect walks I got access to high resolution images (0,5m x 0,5m) of all the villages studied from Birzeit University. I created a timeline from 1997-2004-2014 and complemented these images with the data gathered in interviews, observations and literature studies. This triangulated data set was used as basis for classification in section two. I am confident to say that the study was carried out in a way equal to the value of transect walks. I can even say I benefited some from the changed focus on details to a perspective where the larger scope also would fit.

Lastly, the issue of language and interpreter was a central question to tackle. To access the rural areas I was put in contact by the organizations with their field workers; who came to function jointly as facilitator, gate keeper and interpreter. This also meant that the level of language proficiency sometimes varied. As a result, at times I couldn't follow the detailed flow of discussions. This became an issue at the group interview at PARC where the interpreter would translate short

summaries of longer discussions. I tackled this by summarizing and re-posing the question to make sure my interpretations was correct. Further, farmers had a strong own agenda which sometimes in combination with a language barrier led to the conversation moving out of my hands. To counter the issues of language I could have prepared a pamphlet or similar with information in Arabic about my study. My aims of power and technology are difficult to explain and I sometimes felt that people misunderstood my intentions with the study, assuming it had a more agronomic aim. Ethically, this put me in a grey zone; I always explained my aims with full opacity but it was not always clear if it was understood. I mean to mitigate this by translating a summary of this thesis to Arabic and return it to the facilitating organizations.



Sunset over the Jordan Valley. A man is herding his sheep.

# Background

## Geographical Description

Palestine is located in the Middle East, west of Jordan, south-west of Syria. Its geographic relation to Israel could either be said to be north-east of Israel, in the north-eastern part of Israel or between Jordan and the Mediterranean sea, depending on political view. Jerusalem is located on the western border. Ramallah is the administrative capital. The landscape is predominantly hilly upland with man-made terraces for the growing of olives. The now dried up Jordan River makes out the Jordanian border. The surrounding Jordan Valley is 400 meter below sea level. The region has flat areas with very valuable fertile soil but also rugged hilltops used predominately by the Bedouin community and for herding. When turning the eyes away from the Jordan Valley, towards the more densely populated middle and western West Bank a new landscape appears. These areas are hilly, but less mountainous and dry. The slopes are covered with orchards and the occasional flat land farm. Plots are usually small; one or a couple of hectare and the agriculture is largely extensive.

## Political Context

### **Borders: a short background**

This thesis recognizes the borders of the UN. According to the UN as well as the international community the Israeli settlements built on the West Bank, the Gaza strip, East Jerusalem and the Golan heights are illegal according to the fourth Geneva convention, which specifically deal with civil population during conflict and occupation. Article 49 states that it is illegal for a state to transfer its civilian population to occupied territory (ICRC, 1949). The Geneva convention was signed and ratified by the State of Israel in 1951 and the country are thus obliged to follow the rules stipulated. The official Israeli position on the legal status of the settlement is complex. Israel disagrees to the relevance of the Geneva convention in relation to the settlements due to the disputable legal status of the territories when occupied in Six-day-War after-match of 1967. A big part of the occupation was done thru creating military zones in the West Bank, legal according to Israeli legislation. Officially, the zones were intended to be temporary but with time spread over the West Bank and was formalized as settlements developed on the already existing structures on the ground. Most of the West Bank settlements were developed in an interplay of Zionist settler organizations (e.g. Gush Emunim) and changing agendas of shifting political power in the Israeli government (see: Spatial planning, p.24, who by interpreting the legal framework of land ownership could access land legally or close to legally (see: The logics of the land, p.26). An often used argument was “the facts on the ground”

(Shalev and Cohen-Lifshitz, 2008), meaning that what was already there cannot be reversed. This is a spatio-temporal aspect of the Palestinian/Israeli landscape, something that, along with the complexity and ambiguity, will prove to be a recurrent theme throughout this thesis.

## **History: the Ottoman empire and onwards**

The Ottoman empire stretched over large parts of southern Europe, Northern Africa and the Middle East from the late 13th century to 1923. The area today known as Israel/Palestine was at the time of the Ottoman rule incorporated within the area known as Great Syria. After the fall of the Ottoman empire in World War I and the subsequent fractionation followed a set of agreements between the major Western European powers, where Palestine eventually was declared to be under the mandatory of the British Empire. Starting 1923 and ending at midnight 14 May 1948, at the birth of the State of Israel, the territory was known as Mandatory Palestine. During the years following the capitulation of the Ottomans in 1918, Britain gave shifting and conflicting promises on the future for the governance of Palestine. One of these was the Balfour Declaration of 1917, where the British government makes promises of creating a Jewish nation in Palestine. Contradicting this was the promise made in the 1915 to Hussein bin Ali, the King of Hejaz (territory stretching along the coast from the southern tip of the Dead Sea all the way down to Medina in contemporary Saudi Arabia) and the self-proclaimed caliph and King of the Arab countries, who had started the Arab rebellion against the Ottoman Empire, after a British promise of support for an Arab state. The British government was assigned temporary control over Palestine until 1948 when the State of Israel was officially born. The birth of Israel didn't take place under peaceful conditions but was in fact done in the middle of the first stage of the Arab-Israeli civil war, sparked in November 1947 by the UN partition plan. After 14 May 1948, a coalition of Arab states was at war with the Jewish state, known in Hebrew as the War on Independence (Hebrew: מלחמת העצמאות) or the War of Liberation (Hebrew: מלחמת השחרור) and in Arabic as al-Nakba, the Catastrophe (Arabic: النكبة). The Arab-Israeli war came to an end in 1949, with multiple ceasefire agreements and resulted in the Armistice line, known as the Green line. The human suffering was tremendous and the war resulted in 700 000 Palestinians suddenly turned into Palestinian refugees, living in camps in surrounding countries as well as on the West Bank and Gaza. The armistice line was never a stable territory but rather a temporary agreement (Weizman, 2007). Up until the Six-Day-War 1967, the West Bank was under Jordanian control (Transjordan), the Gaza Strip under Egyptian control and the rest of the former Mandatory Palestine was controlled by Israel; far reaching over the assigned areas according to the UN plan. Following the Six-Day-War Israel occupied the entire West Bank, Gaza Strip, Golan Heights (Syria) and the Sinai Peninsula (later returned to Egypt). The areas remained under Israeli control until the interim agreement between the PLO (Palestinian Liberation Organization) and the Israeli government in the Oslo Accords of 1993 and 1995, as part of the Oslo peace process. Here the foundations are laid out for the creation of the Palestinian Authorities (PA) and for the political division of the West Bank today: the system of A, B and C. The remaining section of this thesis will focus only on the West Bank.

## **Zoning: A B C**

In the mid-90s, negotiations for peace was initiated, known as the Oslo Accords or the Oslo peace process. The negotiations of the Oslo Accords of 1993 and 1995 followed on an intense debate. From the Israeli side, fear was that the administrative parting of the West Bank would further fortify the Palestinian idea of a nation state within the state of Israel. On the Palestinian side, great hopes flourished that this was the time to unite the country. However, the general verdict twenty years later is great disappointment (Shalev and Cohen-Lifshitz, 2008; Weizman, 2007). The agreement is said to be a more efficient tool for division than any fence (Shalev and Cohen-Lifshitz, 2008:15). The tense situation with frequent attacks on Israeli military on the West Bank can hardly be said to be a success story from the Israeli side either. In the Accords, the State of Israel recognized PLO as representatives of the Palestinian people and PLO recognized the State of Israel. A Palestinian state was not mentioned. Neither was halting of settlements, the right to return for the 1948 refugees, the status of Jerusalem or even the borders. A five-year period was envisaged during which none of the parties would take “any unilateral steps that would prejudice the outcome of the negotiations”<sup>4</sup>. Following the five-year transition period, permanent peace agreement was supposed to replace it. Instead, the peace process broke down following the Camp David Summit of 2000. The core issue of the negotiations was the gradual withdrawal of Israeli military from the West Bank and Gaza. Oxford professor Avi Shlaim calls the process “essentially a land-for-peace deal” (Shlaim, 2013) and concludes that the Palestinian resort to violence had part in the break down but as did the Israeli neglect of fulfilling their part. The Palestinians had hoped that by giving up the claim to 79% of their historical land they would be able to keep the remaining 21%. However, the continuation of Israeli settlements on the West Bank sent other signals. In 1999, following the Wye agreement of 1998 and the Sharm memorandum of 1999, the temporary Palestinian Authorities was permanented, as was the A B C division (image 4). In September 2000 the Second Intifada broke out (Shalev and Cohen-Lifshitz, 2008).

The level of Israeli control constitutes the distinction of the different zones. Area A means full Palestinian control, civil and military. Area B means Palestinian civil control and Israeli military. Area C means full Israeli control, civil and military. In addition to this there are areas H1 (Palestinian authority control) and H2 (Israeli control) in Hebron and area E1 just east of Jerusalem. These areas are exceptions, but as I will show in this thesis, what happens here has vast effects of the Palestinian land use throughout the West Bank, related to the Israeli check-points.

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<sup>4</sup> Quotation here from Robert Fisk <http://www.independent.co.uk/voices/comment/robert-fisk-any-other-statesman-who-negotiated-peace-like-john-kerry-would-be-treated-as-a-thief-8760028.html>



Approximately 60% of the West Bank is Area C. The remaining land is split between 22% B and 18% A. The Wye agreement stipulated that 3% of Area B was green area where no construction is to be made (Shalev and Cohen-Lifshitz, 2008). Thus, in reality 63% is Area C. As far as land cover goes, Area A and B largely comprise built up Palestinian areas while Area C largely comprise fertile agricultural land (most is found in the Jordan Valley). Important to note is that the Palestinian land are not coherent, but fragmented. In Area C, the Israeli government is also responsible for planning. The crucial question of planning is further elaborated on under subheading Spatial planning, p.24.

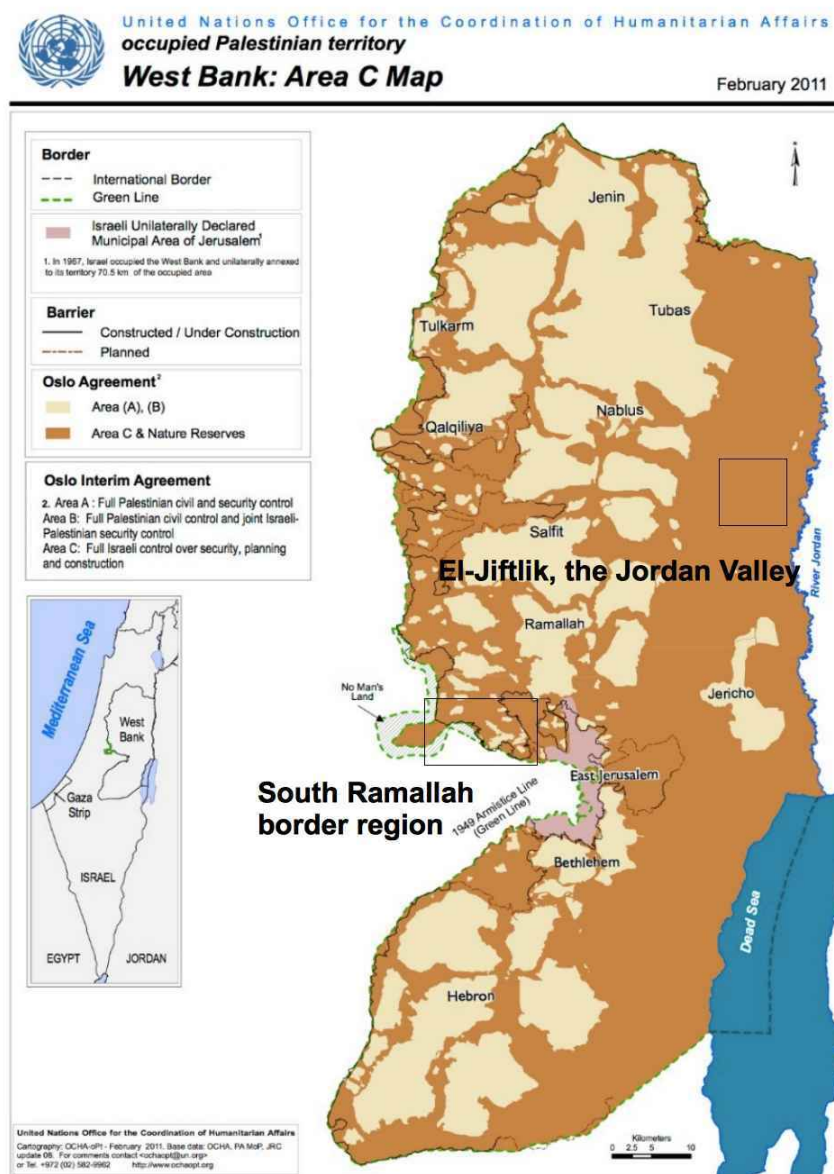


Image 4. The political zoning of the West Bank. Two areas of focus are marked with a black square: the south Ramallah border region and the village El-Jiftlik in the Jordan Valley.

## **The separation barrier and its gates**

Much is written on the separation barrier. No one touching upon the topic of Israel/Palestine can avoid it. It is even semantically disputed. The word “fence” is usually used by its proponents while wall (often capitalized) are used by its opponents. I will in this thesis use the word “wall”. I do so to make the point that the built up structure is only one out of many barriers, but that this particular form is effective because of the features of height and visibility. The wall meanders largely along the Green Line (armistice agreement of 1949) but it also cuts deep into the Palestinian land of the West Bank. As image 3 showed, the deviation from the Green Line of the barrier follows built up Israeli settlements. The physical features of the wall varies: in dense areas close to cities the wall is usually constructed as an up-to 8 meter high concrete wall (image 5). This is usually surrounded with a 3 meter wide buffer zone. In other regions the wall consists of a multi-layered fence, equipped with observation systems, patrol road for military vehicles and barbed wire (image 6). According to the Israeli Ministry of Defence (MOD, 2007), the barrier is a concrete wall (“solid barrier system”) in areas where risks of sniper shots from the Palestinian side is the largest. Important in this thesis is not the construction itself but rather that it constitutes a physical barrier.

The green light for the building of the wall came in 2002. The wall is expected to be 712 km long, twice as long as the Green Line. Number from 2014 (OCHA, 2014) gives: 62% of the wall is completed, 10% is under construction and 28% are planned construction. In total 9,4% of the West Bank is isolated between the wall and the Green Line (Israel); 150 Palestinian communities, approximately 11 000 individuals. These individual are necessitated to receive a special permission to cross the guarded gates. Family members wanting to visit need to apply for a visitors permit. Permits are issued by the Israeli Civil Administration and gives the right to pass the limited number of gates for civilians. Besides the people residing in the isolated area, a large number of people are living in Area A or B but is farming land in the shut of region. These people are dependent on the 81 agricultural gates of the wall. How the gates are open or closed vary. Of the 81 gates, 9 are open daily but with varying hours, 9 are open for some days during the week plus for the harvest season and 63 are open only for the harvest season, severely affecting the work on the land (OCHA, 2014). Special permits are given to individuals, but not always to the most suited member of the family (OCHA, 2007). It is estimated that there is a 60% reduction in yield, as compared to land on the Palestinian side of the wall (OCHA, 2014). Besides the agricultural effect, the humanitarian situation are increasingly hard for the individuals behind the wall. Most services are on the Palestinian side, including medical care. The time for an ambulance to drive from a village to a hospital has in many cases gone from 10-15 min to 60 min, causing feelings of concern and anxiety (OCHA, 2014).



Image 5. The barrier as a concrete wall, Bethlehem.



Image 6. The Israeli Ministry of Defence's illustration of the separation barrier as a fence (MOD, 2007)

## Spatial planning

The West Bank has seen several settlement strategies, although not officially accepted by the state - the creation of settlements is, and has been historically, a complicated collaboration between state organs and pro-settlement organizations (Broich, 2003; Weizman, 2007). The first strategy formulated was the Alon plan in 1967, named after Yigal Alon, head of the Ministerial Committee on Settlements. For state security the plan suggested annexation of the Jordan Valley and the Judean Desert (i.e. the

central West Bank) for military purpose and the establishment of Jewish settlements within these to ensure Jewish presence. The original approach of the Alon plan was to not build settlements on areas that was densely populated by the Arabs but this ambition changed over the course of time (Efrat, 1988). In 1977, when the Labour government was replaced by the Likud government, the Alon plan was abandoned in favour of what is known as the Drobless Plan. The Likud government held a more offensive line and the Drobless Plan was in fact a realization of the pioneering right-wing extremist religious settler organization Gush Emunim who had been, in coalition with the government's plan, established settlement in the densely populated mountain ridge area of the West Bank (Weizman, 2007). The reciprocation between the state and the organizations is symptomatic for the proceeding of the settlements. Drawing on this plan was the following Sharon Plan, named after the then (1977-1981) Minister of Agriculture, later Prime Minister, Ariel Sharon. In this plan only two small, unconnected patches of land would remain Palestinian. As did the Alon and Drobless plan, the Sharon plan was explicit in the ambition of using settlements as a way of annexing land. The plan was never officially adopted but led the unofficial work (Weizman, 2007) of the Ministry of Agriculture. The Ministry played a central role through their financial support of the World Zionist Organization Settlement Division - that functioned as an intermediary for establishing settlements, and through their control of "state land" - which is central to this thesis.

Today, the spatial planning of Palestine remains largely under Israeli control. In Area C, Israel are in charge of all spatial planning (B'tselem, 2013). This means that each construction work or repair work needs permission. This also means that the natural growth of the Palestinian villages often times are halted due to restricted planning. There is an unwillingness to allow Palestinian villages to develop from a traditional agglomerated core village to a dispersed village based on natural growth (Shalev and Cohen-Lifshitz, 2008). The spatial logic of the Palestinian villages of the 19th century was largely based on a balance between the need for security and the access to water and arable land. Villages were under frequent attacks from nomadic groups and experienced an increasing rate of attacks due to the falling apart of the Ottoman Empire. The villages were usually located on a hilltop and constructed in a way that made it possible to keep strangers out. However, with the British Mandate, the region saw a major demographic increase, economic growth and increased security due to the strong central government. This caused the villages to gradually grow beyond the dense village core and develop into a more dispersed village. The economic development also made the region less dependent on agricultural land and this allowed for construction on land that was previously saved for farming (Shalev and Cohen-Lifshitz, 2008:47-52). The current spatial planning for existing Palestinian villages largely follows the logic of the 19th century. A Palestinian village usually have one of two spatial plans to follow: a regional outline plan drawn up by the British Mandate or a Special outline plan, drawn up by the Israeli Civil Administration. The plans were rarely applied during the Mandate, and during the ensuing rule of Jordan, most Palestinian development was without permission following natural growth. Even after the 1967 start of the occupation was the regional plans really used; rather national plans or local plans set the guidelines. However, with the explicit settlement strategy of Drobless plan the regional outlines were suddenly implemented, in order to hinder Palestinian development on land assigned for settlements (Shalev and Cohen-Lifshitz,

2008:56). Today, development that has moved beyond the spatial planning of the British Mandate are considered as illegal and cause for eviction. About 20 years ago Special outlines were starting to be drawn up for particular villages, to function as more detailed local plans. With few variations, the development in these villages follows the pattern as described above; absolute demarcation of areas assigned to living and farming not allowing natural growth. One noteworthy contribution by the new local plans was the clear line it drew from land ownership to planning. Palestinian development is allowed only in Palestinian privately owned land, while the state land was assigned to the Israelis (Shalev and Cohen-Lifshitz, 2008:103). As we shall see in the next section, the classification itself is a complex matter.

### **The refugee camps**

A few lines should be written on the very particular situation of the refugee camps, because they make out a very significant structure in the Palestinian urban landscape. This thesis predominantly deals with the non-urban landscape but the situation of the camp from a geographic time-space perspective is relevant. Following the 1948 war many people were put in displacement and placed in refugee camps in Lebanon, Jordan and Palestine that at the time was occupied by Jordan. Today, 775 000 registered refugees live in 19 different camps on the West Bank only. A refugee is a person who is related on their paternal side to someone put in displacement in 1948 (UNRWA). The camps make out separated parcels in the urban fabric where time is not allowed to simply move forward. The camps are in themselves a reminder of “the Right to Return”, which is the phrase used to denote the idea of a temporary displacement and a constant demand to be able to go back to the village in Israel. Today, the Right to Return is less a particular village, and more a general claim of restoration. Usually the camps are grown into the fabric of the adjacent city or town, but services such as water and electricity is provided by the UN. Due to the temporality the architecture has taken on an unplanned structure.

## **THE LOGICS OF THE LAND: SPATIAL CONFIGURATION OF THE PALESTINIAN LANDSCAPE**

### **The irreversible geography of settlements**

When searching for rules, order or logic in the territorial aspect of the Israeli/Palestinian conflict one must very fast remove any idea of a neutral start, a “year zero”, for the conflict. Immigration to the land area today known as Israel/Palestine took place already in the 19th century, as was in its initial phase generally not considered to be a problem from the local population. The first Jewish settlements were built around the Hebron area short after the war in 1967. However, there had been built up Jewish areas on the West Bank before the war 1949, usually in the form of Kibbutzim. As described above, the official Israeli policy towards the settlements has shifted with each government depending

on international developments, changing political priorities of policymakers and the “relative weight of various interest groups” (B’tselem, 2002:11). When the settlement movement took off in 1967 the Israeli government didn’t have an explicit plan but this was soon changed after pressure from different interest groups.

Today there are 149 settlements on the West Bank, *legal* according to Israel. In addition to the settlements there are about 100 outposts, *illegal* according to Israel, since they were built without approval from the Israeli state. The building of outposts started in 1995 when pressure from the international community caused Israel to cease the establishment of settlements (Settler Watch, 2016). However, a report ordered from the Israeli government in 2005 to investigate the outposts, known as the Sasson report (Sasson, 2005), uncovered that the Israeli authorities and governmental organs had contributed to the buildings of outposts, contrary to the official position. Regional authorities on the West Bank in collaborations with ideologically driven organizations and private settlers systematically worked with governmental departments to facilitate buildings; economically as well as by supplying infrastructure such as electricity, roads, sewage and water. Thousands of orders of evictions issued by the Supreme Court has never been signed (as is needed) by the Prime Minister or the Minister of Defence. Laws and rules are not upheld in the outposts; the reports mentions how caravans are forbidden to be brought into the occupied territories without special permission - a crime that can lead to 5 years in prison - but there is no court that is authorized to execute the sentence. Caravans are a common sight in the outposts. The double face of the legal system and the institutionalized crimes erodes the state of Israel as a constitutional state, the reports states (Sasson, 2005:44).

The complexity and close to incalculable net of policies, laws and statements is sometimes put forward as a strategy - it creates an irresolvable geography too illogical to ever make a territorial solution possible (Weizman 2007:8). The complexity is reinforced by the linguistics of name shifting and semantics of mapping (Maitland 2015, Wallach 2011, Weizman 2007). Thus when the Israeli government has one face and the bodies acting on its behalf (the organs, departments, institutions) has another and the Supreme Court claims neutrality but in reality is a political tool a quote from Weizman (2007:7) comes in handy: “Elastic territories could [thus] not be understood a benign environments: highly elastic political space is often more dangerous and deadly than a static, rigid one”.

The interplay of legal acrobatics, illegal take-overs and war took another turn in 1979 when the High Court of Israel rejected the often used *security* argument in the trial on settlement Elon Moreh. The court ruled that “security reason” could not be used as legal reason to build settlements (Shalev, 2012:45). The ruling was not presidential, nor was it intended to be, but no settlers longer dared to try this method. However, large chunks of land were transferred to Israel using the strategy of security, particularly in the Jordan Valley where land was claimed to be used as a buffer zone to Jordan. In the void of the old method, a new method was developed to claim land - using old Ottoman land policy law to find state land.

**Introduction: how land was managed and (not) owned in the Ottoman Empire and a Western understanding of Ottoman law**

Before 1867, foreigners were not allowed to purchase land in the Ottoman territory and those who did was left to bribery and fabricated middlemen (Kamel, 2014:231). However, a couple of years before earlier, on British initiative, people specifically from the Jewish diaspora were granted the possibility to own land in Palestine. The Ottoman empire was under financial pressure and a need to facilitate foreign land purchase as well as tax revenue emerged, with classification of land as a consequence. The system of land ownership was organised on village level during the Ottoman empire. A law passed in 1858, known as the Land Code, formalized ownership by demanding registration of land. When the British took control of the region, they formalized the classification further by stating that all land needed a registered title-deed. Up until then, no papers had been necessary. The Israeli claim to land access in the West Bank is partly built on an interpretation of land ownership where large tracts of land was in fact never privately owned by the Palestinian population, but owned by the state in a form called *mîrî*. Following the laws regulating *mîrî*, any land not used for three years reverts to state ownership. The state are then free to lease out the land to any organization (Weizman, 2007; Kamel, 2014, Shalev, 2012). The claim can thus be said to be partly true: land was largely used in the form of *mîrî* and rarely privately owned by an individual and the land that was privately owned was largely legally bought by Zionist organizations. However as we shall see, the Ottoman system of access, right and ownership differs in some ways from the Western concept of the same and the misinterpretations (conscious or unconscious) has made the law a tool for settlement (Kamel, 2014; Nadan, 2003). This facilitated the leasing out and selling of large areas to different religious groups and NGOs, coveting soil in the Holy Land. This does not only refer to Jewish settlers but different groups of Christians as well (Kamel, 2014).

The 1858 Land Code divided each plot of land was into six sub-groups:

- *mulk* - a privately owned piece of land, very small percentage, almost negligible part of Palestine mostly found in built-up town areas
- *mîrî* - state-land, distributed for use but *reconverted* to the state if left uncultivated (*makhlu*) for three years (exceptions made if landowner is drafted to the army or fallow for agricultural reasons) or if the owner died with no one to inherit the land. If cultivated for five years, ownership could be claimed. A tenth of production plus a tax was paid to authorities.
- *mawat* - a form of *mîrî* land, owned by the state but uncultivated and placed over a half an hour walking distance from a village settlement and therefore declared “dead land”. However not allowed to use by the government (not taxed), several villages used the land for grazing and sometimes agriculture, benefitting those who used it. An important note on the *mawat* land is that it was in fact often times used by bedouins and they were thus in reality the owners.
- *matruk* - land for public use: cemetery, road, river.
- *waqf* - intended for religious activities, the profit was destined to disadvantaged groups.
- *jiftlik* - *mîrî* land in the Jordan Valley, held in the name of the Ottoman sultan (Kamel, 2014:234).

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- *mushâ* - parallel to the mulk and *mîrî* land existed a system of collective land holding. The plots of land were not assigned an individual but a village. In the *mushâ* system the land is rotated every one, two or five year to give each farmer piece of the best land. It was not recognized in the Land Law from 1858 but was the dominant system of cultivation. (Nader, 2003; Kamel, 2014).

### **To register land or not: absentee owners**

Part of the Ottoman incentives for land registrations was to increase agriculture yield and thus tax revenues (Weizman, 2007:117; Kamel, 2014:236). This led to Palestinian farmers signing off from legal ownership (or rather: not signing on) of more or less all land that could not be cultivated. It could be large areas of desert but it could also be small rocky patches of land inside larger areas of cultivated land. The fragments of state land followed largely the topography; leaving the eroded tops of the mountains dry and uncultivated. Later, in the 1990s 38% of the West Bank consisted of these disconnected patches of land claimed by Israel (Weizman, 2007:117).

Aside from not wanting to pay taxes for uncultivable land, there were two main reasons for the farmers not register a piece of land: a general aversion to Ottoman state control and the threat of enrolment in the army. A landowner was obliged to military service (Tilsen, 2003). This led to large pieces of land not being assigned to any of the peasants working the soil (and therefore the rightful *mîrî* owner according to the law). Instead people in the possession of power and money managed, with the help of widespread corruption, to sign on to large tracts of land as legal owner. These owner, often absentees (i.e. not living in the area), later sold the land to willing buyers, i.e. Zionist settler organizations (Tilsen, 2003; Kamel, 2014). The aversion to be registered in the governmental lists led to a common habit of registering dead relatives or fictive characters, also leading to land not having the rightful owner and thus being registered as *mawat*; dead (Kamel, 2014). What was intended by the Ottoman government to strengthen the state control over land, instead turned ownership into a few absentee owners (Tilsen, 2003, Nadan 2003). The land that in fact was registered as *mîrî* following 1858 was assigned to an individual who thus got the right to sell it to someone of the same village or to a stranger. However, when *mîrî* land was sold it was the *right to cultivate* that was sold, not the actual land (Kamel, 2014).

### **The Land Code implemented during the British Mandate**

Following the start of the British Mandate, the Ottoman Land Code of 1858 was implemented fully on all inhabitants in the region, even though the classification was perceived by the peasants as constructed and not legally recognizing the widespread use of the *mushâ* system (common in all the eastern Middle East). A parallel here should be made to the Swedish cadastral mapping, also not recognizing the village level organization of agriculture, by mixing absolute land measurement with generic village symbols, as described by Wästfelt (2007b). The main rationale for the British initiative



was to further increase agricultural development for the Palestinian farmers (Nadan, 2003) that was generally perceived as underdeveloped (Broich, 2003). The initiative consisted of cadastral surveying and registration of land (registration in the Ottoman era had been not cadastral and often without measurement or maps), and a consequential fractioning of the still used *mushâ* system. The British aimed at dividing the land organized in *mushâ* so that each farmer would have greater incentives of developing their own plot, rather than considering the good of the community, which was thought of as much more ineffective. Simultaneously, the cadastral mapping individualized state control. How the dividing of the commonly held land was performed and what caused it is disputed within academia. The main strain is between those who argues for an economic explanatory model where the ineffective system of rotation between farmers every other year caused the peasants to themselves to split the land and manage (or sell) their own land and those who argues for a holistic understanding of the *mushâ* system as the essential way to live in a community and therefore understands the reform as more or less entirely top-down (Kamel, 2014). The model this thesis follows is a mutual understanding of both the arguments, arguing that the *mushâ* system was in fact not as inefficient as the (termed) colonial understanding of it frequently makes of it (Kamel, 2014; Nadan, 2003). In fact, as Nadan (2003) shows, the organization among the peasants sometimes went *from* a divided system *to* a *mushâ* system, supporting the argument of the efficiency of the land system (or at least that is was preferred). The system of *mushâ* did however hinder the arrived Jewish settlers from buying land, since buying a small piece of land required buying the entire system. It was usually unregistered and thus an unsafe deal. This notion increased the British Mandate government desire need for “new order in land registration”, meaning conducting a cadastral registration and a splitting of the *mushâ* and consolidation of the plots (Nadan 2003:327). When a piece of land had been surveyed with cadastral methods the authorities suggested a plan for dividing according to the best possible efficiency. Following the presentation of the plan were a number of instances where appeals could be made before the court who made the final decision. If the land was not partitioned in agreement between the authorities and the village, still, information about the value of the land and crops had been gathered. Further, registration was expensive (3% of land value). Particularly expensive was the registration of small plots, as a way to encourage consolidation of small plots into larger. However, as land was being registered the value simultaneously increased and exceeded the agricultural value. This was due to the increased Jewish demand for land (Nadan, 2003:329).

So how was it that the reform meant to increase Palestinian development ended up facilitating the ownership of land from Arab to Jewish? As shown, several factors interplayed: the aversion of registration, corrupt authority representatives, and a colonial reading of the Palestinian land use.

### **Misreading of the common**

An often cited quote is that of William Polk: “Long before the Balfour Declaration, which is often seen as the fount of all contention over Palestine, the inarticulate but ancient peasantry had slipped a rung on the ladder which was to lead them down into the refugee camps in 1948” (Polk et al., 1957).

It is in the interpretation of state-land as a “modern” meaning state land - held by the government away from private use - that original intentions are distorted. The traditional understanding of the state land, *mîrî*, was a form of common *use*, where the fundamental need of the community was the essential foundation holding the villages together. This perspective is not unique for Palestine, contrary, misinterpreting common land is a well-documented problem in landscape research (Widgren, 2006). The ultimate owner of land was the muslim collective, the *ummah muhammadiyah*, personified by the Sultan (Kamel, 2014: 234). Thus, state land was never, as conceptualized in a “modern” understanding, property of a fixed “state” leased out to the population. In reality, the land was never retrieved by the Ottoman state or British Mandate (Kamel, 2014; Nadan, 2003) unless in the case of the structurally discriminated against bedouins (Avneri, 1984:62-68). The clashing of the traditional ways and the colonial interpretation lead to numerous long and complicated lawsuits over land (Tilsen, 2003). Following these logics, when Israel occupied the West Bank and started the settlement offensive, they did it on land that could be (mis)interpreted as owned by nobody: *mawat* (not registered), *matruk* (everybody's land for road etc.) or abandoned *mîrî* land that for different reasons had turned *makhlul*; not used (Weizman, 2007; Kamel, 2014; B'Tselem, Nadan; 2003). When the Israeli government got access to all the state land owned by the British Mandatory government, the area comprised about 70% of the Israeli controlled Palestine (Auman, 1976 in Tilsen, 2003; Kamel, 2014:230).

Narrowing the lens:

Interpretations of landscape and power

### **Remodelling the landscape: projected dreams and diaspora**

The way a landscape is thought of and pictured is an agent in forming the same landscape. There is an interplay of depicted, idealized landscape, the tradition of mapping and the recreation of landscape as social organization and physical features (Olwig, 2005). The perspective drawing of the famous Dutch landscape painters is connected in time with the emerging tradition of cadastral mapping using measurement and a general scientific procedure; the landscape painting is really a map projected from the side (Olwig, 2005:25; Eriksson, 2007:134). The paintings took part in keeping traditions alive, by alluring to a different social order, often in the Dutch paintings to the tradition of customary law (Olwig, 1996). Related is the way the merchant economy entered the scene and soon replaced barter as the dominant form of business. The geometric way of perceiving land as a distant object present in landscape paintings and scientific mapping (Eriksson, 2007) was a prerequisite for the new abstract economy, with land demarcation and fences as a consequence (Olwig, 1996). However, an image of a landscape has different meanings depending who is looking at it (Nazer, 2004) and so does the mapping of a landscape (Eriksson, 2007; Wallach, 2011). Seen thru an academic lens of orientalism,

the Palestinian/Israeli landscape has a long history of being remodelled after an idealized memory or narrative. In the Palestinian context it has traditionally been done by planting forest (Long, 2008). The religious and orientalist environmental narratives of the Palestinian land (Broich, 2003; Matar, 2009, Harris, 2014) told stories of the land of milk and honey, blossoming with green fields - an image that was not consistent with the contemporary Palestinian landscape. The widely used method of foresting have had two major functions. First: reviving the diaspora by using the strong symbolism of tree, roots and life (Long, 2008; Wallach, 2011). Second: erasing the painful past of conflict and war, whose memories are scattered over the landscape in the form of demolished house foundations (Falah, 1999). A common symbol for this is the blue and white boxes, used to gather money from individuals in the Jewish diaspora, that simultaneously used the cartographic depiction of Israel as a way to create the idea of Israel (Long, 2008; Wallach, 2011; Schnell and Leuenberger, 2014).

*Every sixpence collected for the blue and white box of the Jewish National Fund merited another leaf [on a paper tree]. When the tree was throttled with foliage the whole box was sent off, and a sapling, we were promised, would be dug into the Galilean soil, the name of our class stapled to one of its green twigs ... The trees were our proxy immigrants, the forests our implantation. And while we assumed that a pinewood was more beautiful than a hill denuded by grazing flocks of goats and sheep, we were never exactly sure what all the trees were for. What we did know was that a rooted forest was the opposite landscape to a place of drifting sand, of exposed rock and red dirt blown by the winds. The diaspora was sand. So what should Israel be, if not a forest, fixed and tall?*

(Schama, 1995:5-6, quoted in Long, 2008:62)

The story of the s.k. Blue Boxes is found in the opening section of the Jewish National Fund's website (JNF, 2016) under the headline *1901: It all started with a dream*. The JNF-KKL (Jewish National Fund - Keren Kayemeth LeIsrael) was founded 1901 at the Fifth Zionist Congress in Basel, Switzerland as a means to gather money for purchase of land in the then Ottoman-controlled Palestine. Twenty years later the Blue Boxes was found in a millions of homes all over the Jewish diaspora (JNF, 2016; Wallach, 2011). The JNF are explicit on their webpage that the trees bought with the coins from the boxes was used to claim land (JNF, 2016). They are also careful to mention that Israel have no natural forest, only barren land met the newcomers by the turn of the century. The notion of “greening the desert” will be a recurrent argument for the stability and prosperity of the State of Israel (Weizman, 2007:59; Falah, 2003:206, Pappe, 2006:221). The symbolic and hands-on method is still in practice; tree purchased by the JNF website is 18 USD. Today trees are planted in memory of a loved one, rather than as a means for claiming land (JNF, 2026), however, the already planted forests are as political as ever. It is worth spending a few lines describing the JNF, because the importance of the organization is by no means outdated. 91% of the Israeli land is divided into three main landowners, all being “national land”: State of Israel 75% (roughly corresponding to land classified as state land from Ottoman empire and the British Mandate), Development Authority 12% (highly politically sensitive land; such as land previously owned by Arab landowners put in displacement after the 1948 war. The land was managed by the governmental body Custodian of Absentee Property up until 1950)

and the JFN 13%. Until the 1960s the JNF managed their lands, but they later signed a treaty with the State of Israel to put the land under state administration thru Israeli Land Administration and Israeli Land Council. Until year 2000 a clause added by the JNF controlled that the leasing of land only was made out to the Jewish population. In 2000 the Supreme Court ruled this to be discriminatory to the Israeli Arab population and illegal (Jewish Virtual Library).

If the diaspora used trees, the modern Israeli settlements on the West Bank use *language* to normalize the occupation in a process of “getting used to it”, using the concept of *terroir* (Handel, 2015). It is not uncommon for the Israeli settlers to be involved in the growing and producing of wine; *terroir* is a term usually used in relation to wine and the origin of the grape; geography, soil, climate, tradition. Handel (2015:1351) writes “In contrast to modern perceptions of territory as an abstract legal–political entity, *terroir* invokes images of organic relations between people and a specific land with a unique ‘character’”. What Handel (2015) seems to suggest is that in normalizing the occupation of the landscape, the concept of territory is mixed with the concept of custom and human heritage embedded in the landscape; *terroir*. Important to note when talking about normalization is that the process is targeting all sides of the conflict. It targets Israel’s national conscious and history (Handel, 2015:1351) and recreates the Israeli historical narrative of an empty desert (Nazer, 2008:20). However, while within the Arab population there is a strong tradition of remembrance and stories, dreams and myths of future return (Said, 1999; Nazer, 2008) there is an important feature of the process that is performed by the Palestinians themselves; by adapting contemporary architecture to the settlement style. I will have reason to get back to this topic.

### **Topography: the hilltops and the settlements**

The way landscapes are made out is rarely a coincidence, but follows a spatial logic based on both functionality (labour intensity, fuel, manure etc.) and/or regulations (Wästfelt et al., 2012). The Israeli occupation of the West Bank follows a vivid spatial logic (Weizman, 2007; Handel, 2014) and thus, the landscape is consequently affected accordingly. Keeping the Ottoman land registration in mind the division according to topography is sensible. No unnecessary land was registered, due to taxation, and therefore the hilltops where, more often than the slopes, classified as state land (Weizman, 2007; Falah, 2003; Handel, 2015; Nazer, 2008). An (in)famous call from the former prime minister Ariel Sharon in 1998 rapidly increased the outposts (ARIJ, 2012). The speech was broadcast in Israeli radio in november 1998 and called for Israelis settlers to “take control” of the Palestinian hilltops to prevent them from falling in Palestinian hands: *Everybody has to move, run and grab as many [Palestinian] hilltops as they can to enlarge the [Jewish] settlements because everything we take now will stay ours... Everything we don't grab will go to them* (BBC, 2014). Another quote by Ariel Sharon clarifies the agenda of the heights. In an interview with the Israeli newspaper Ha’aretz from 2003 he states that “*Arabs [in the West Bank, my edit] should see Jewish lights every night from 500 metres*” (Sivan, 2003 in Weizman 2007:81). The Israeli government makes a distinction between illegal outposts and legal settlements. This distinction is not made by the international community. Many settlements have started (and are starting) as an illegal outpost, consisting of a few trailers, only to develop into an

established settlement over time (Handel, 2014). Increased security for settlers has changed the architectural patterns a bit, causing the settlements to move down from the hilltops towards the lowland slopes (Shalev and Cohen-Lifshitz, 2008:49). However, the hilltop position is not only a question of safety and land access, but is also a factor of control thru its mere visibility (Weizman, 2007; Efrat, 1988:146).

### **Spatial logic: parcelling the landscape**

Driving thru the Palestinian landscape of the West Bank, noticing the settlements is inevitable. A strong architectural symbolism has guided the construction; with red tiled roofs, symmetrical houses following roads circling along the natural topography, always behind many-layered barbed wire, always on the highest top. But before scrutinizing the effects of the architecture, I want to stay a moment on the road itself. A major force of transition on the West Bank is the spatial distribution of settlements and the roads connecting them. The roads cannot be separated from the complex of settlements, out of which each settlement is part. In fact, the roads, not the hilltop houses, really claim the land and causes the Palestinian land to be divided into parcels. The roads connecting the settlements (roughly 250) cuts of access between the parcels and in all relevance creates a Palestinian landscape within *its* gates (Handel, 2014). Noteworthy is how fear has been a factor in how the parcelling are functioning; the fencing of some roads increased with violent attacks on settlers following the First Intifada 1987. With the Second Intifada (2000-2007), the prohibits for Palestinians to access some roads was completed<sup>5</sup>. Today the checkpoints are a sleeping, but constant network of spatial control, that threatens the Palestinian population of popping up at any time and thus severely transforming the Palestinian time-space (Handel, 2014), causing if not fear, then at least constant insecurity. Also noteworthy is the resistance of many settlers to fence even after attacks (Handel, 2014) because of the weakened effect of land claim by demarcating the claim (Wallach, 2011; Handel, 2014). The roads make out a specific foundation of the Palestinian landscape in relation to time-space. They are tracks of fast transportation for Israelis, and limits and borders for the Palestinians, causing the latter to have an increased travel time if it is at all possible to travel. A regular road is possible to cross and doesn't have to be barrier. A highway however, much like a railroad, is often not possible to cross. All in all, the systems of roads and checkpoints have created a parcelled Palestinian landscape (Handel, 2014, Shalev and Cohen-Lifshitz, 2008).

### **Landscape of control or not: power and environment**

Weizman (2007: 81) writes in relation to the hilltop placement of the settlements that “the sense of always being under the gaze was intended to make the colonized internalize the facts of their domination”. Weizman (2007), although not explicitly, is drawing on a Foucauldian idea of internalized control, transmitted thru the landscape. In fact, the most often cited pages by Foucault on

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<sup>5</sup> One third of the West Bank road network (2000 km) are restricted, prohibited or partly prohibited for Palestinians, excluding those roads that are exclusively leading up to a settlement (B'tselem, 2004)

the topic (1978:200) is peppered with quotes like “the panoptic mechanism arranges spatial unities that make it possible to see constantly and to recognize immediately” and “visibility is a trap”. The idea of power embedded in the surrounding environment is a prominent thought within the field of landscape research and is explicitly made by Olwig (1996; 2002; Olwig and Mitchell, 2005).

Nature and environment are intimately linked with perception of power; environmental narratives in general reflects the overarching understanding of power (Alatout, 2006). In the Israeli/Palestinian context there is a difference in how environment and territory is perceived, connected to experience of power and displacement, with Israelis having a more non-territorial understanding of environment and instead a more bio-political understanding, focusing on quality of life and health (Alatout, 2013). The increasing use of *terroir* by some settler groups further strengthens the idea that the concept of environment in Israel is one focused on life quality and connectedness to nature, than of territory and power. This notion could possibly have impact on how power are functioning in the landscape. The Palestinian narrative of environment is one that is influenced by a territorial, sovereign understanding; directly connected to the Palestinian experience of land loss, displacement, spatial exclusion and land expropriation (Alatout, 2013). Thus, in the Palestinian narrative environmental issues is always (and if not, then discarded as irrelevant) connected to the occupation: the lack of functioning governmental institutions, environmental regulations etc. Further, environmental goods are seen as mutually beneficial for the Israelis and maintaining them, consequently, a way of taking the edge of the demand for freedom from occupation or even strengthen the occupation (Alatout, 2006:610). On the Israeli side, sovereign territory is taken for granted by the major discourse on environment and the focus is shifted to the individual (Alatout, 2013). This follows the logic drawn up by Foucault (1978) where the liberal democratic nation-state moves from territory and an existence of government based on an outside enemy, to population and health, control, classification and government performed by the individuals, in between the individuals (the multiplied and dispersed discipline). The enemy in the later state is from within. The analysis is made along national lines since the major conflict is defined as such. If the understanding of environmental narratives is a reflection of general experience of power, then it seems consequential that the dominant analysis of one’s territory (be that the nation, the individual relationship, the city one lives in) follow.

What is missing in the dichotomization of the two conceptualizations is the interaction between the two - Alatout (2006:609) points out that Foucault himself reflected on his work as largely disregarding geography, using it mainly as a backdrop. Little attention is paid to territoriality as a political strategy<sup>6</sup>. In Foucault’s own words, the only truly geographical term is that of “archipelago” and he himself uses it to describe the way the punitive system (i.e. prisons) are physically dispersed while at the same time covering the whole of society (Foucault, 1980:68). Each categorization of the population (citizen, student, patient) requires a corresponding *space* (a state, a school, a hospital), thus there can’t be a separation wall if there is not a category of population corresponding to the new space. They will be created. And the population category created as “within the wall” will

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6 Foucault (1980:76) comments on this in the book *Power/Knowledge: Selected Interviews, 1972-1977*.

conceptualize their environment as they conceptualize power: territorial. Moreover, the construction of settlements, roads to settlements, the separation wall etc. has environmental consequences, not knowing national boundaries: increased pollution from roads and barriers in natural habitats are only a few examples (Alatout, 2006:605). The theory of environmental narrative and general understanding of power in relation to nature and surroundings holds relevance to this thesis because it helps in analysing the conceptualization of the landscape and the multiple effects of changes. The creation of one spatial category (i.e Israeli spatial pattern) creates a corresponding spatial category (i.e the Palestinian spatial pattern). Further, environmental values and, as an extension, landscape perceptions has proven to impact the outcome of land use mapping (Gasteyer, 1999; Matar, 1999; Broich, 2013).

### **Orientalism: Perceptions of the Palestinian landscape in time**

The theory put forward by Alatout (2006) on environmental narratives correspond to findings on perceptions of landscape change presented by Gasteyer (1999) and Nazer (2008), both basing their understanding of socio-cultural landscape on the work of Cosgrove (1994). In a study (Gasteyer, 1999) set in the landscape surrounding the West Bank city Hebron, Palestinian scientists noted a great degree of land degradation, connecting it partly to “the occupation”, while non-Palestinian scientists did not make the explicit connection to role of the occupation in creating overgrazing and population density. This echoes the theory on environmental narratives (Alatout, 2006) relating to territorial understanding of power. Moreover, the study showed how different groups noted different things on the ground; herders noted land as cultivated where farmers did not. The perception of landscape is related to prevailing interaction with the land, political beliefs and group affiliations (Gasteyer, 1999: 46), i.e. one’s place in the land (Nazer, 2004). Moreover, it has consequences for land use mapping; the British Mandate, applying a western gaze, consequently mapped marshlands, used by Palestinians for agriculture, grazing and industry, as non-valuable land, based on orientalist assumption on arab land use in relation to water (Broich, 2013) and on what is productive land (Gasteyer, 1999). One thing that differs Palestine from general studies on the orientalist gaze is the specific perception of the land as *holy* (Mater, 1999). One effect the conceptualization of the landscape as holy has had, is on the perception of how the land and the people relate to time.

During the age of British takeover, the dominant idea was that of development. The region was perceived as degraded and mistreated by the (by nature) undeveloped, backwards Arabs who didn’t have the human potential for developing the country (Jabareen, 2015). The mental images of the Holy land was strong, even for those who had never stepped foot in the region (Broich, 2013; Mater, 1999). In the minds of the West, the soils of Palestine did not seem to have a contemporary life, but was rather a hardened piece of rock, a palimpsests where the past was still the active force. The previously mentioned renaissance *Theatrum Orbis Terrarum* by Abraham Ortelius had played an important role in the creation of this silenced and empty Palestinian land (Harley, 1988:282). The publication as a whole was an attempt to provide a non-fictional map, showing only measurable subjects. However, on the pages dedicated to Palestine, there was suddenly a side stepping away from the neutral approach, although with no explicit distinction made. Suddenly a mix of biblical names

and places tracing the Exodus, without any anchoring in the otherwise clear scientific base of the maps, appeared. Where countries like (now) Italy were given old names and new names, in Palestine the names were mixed, giving the impression that the modern names was just a current misuse (Matar, 1999). Similarly, in the era of British and Zionist colonization, the Arabs were characterized as existing outside of time, millenniums passing without them moving in the direction of development (Broich, 2002:266). This oriental environmental narrative of a holy land flooding with milk and honey, destroyed by its current inhabitants had far reaching effects on the way land shifted owners and usage. The British perception of Arabs as backwards was combined with a perception of Jews as inherently forward; the perception of Palestine as “strange and defective” was combined with a perception of the West as “normal and productive” (Broich, 2003:260). The Palestinian land use was at the time largely extensive. Irrigation existed but in small scale. Land use was made out following streams and springs, fruit trees was planted so that not much water was needed. The British Mandate government introduced schemes of development, trying to increase revenue from the land by drying up large “unused” parts, in order to create irrigation on other parts, all in all resulting in a disruption in the traditional Arab use of land, in favour of the the modern colonized use of land. All in all the orientalist environmental narrative “moved” water and thus played a part in displacing Palestinians, without taking the actual land. Important to note is that there is no straight line of power, working from the Mandate government and down (Broich, 2003). Power, it seems, is the complex network of actors; both human and non-human.



The terraced landscape of the south Ramallah border region.



# Results

Section one, in which interviews are presented.

*The transcribed names of the villages and settlements varies. In this thesis I consequently use the English version. I do this so that the villages can be found on Google Maps.*

## **The “blurring” of the lines**

*“Before Oslo Accords everybody knew that Israel was occupying and they had to provide services!”,* politician Jordan Valley, male.

The farmers interviewed are all located in Area C. The fact that land is located in an area where Israel has full responsibility of both civil control and military control has a number of consequences. One is the blurring of the conflict, meaning that the complex political mosaic is making it hard for the Palestinians to get support for their struggle. This was expressed by the politician in the Jordan Valley, in the headline quote. Before everybody *knew*, now it is unclear. The quote holds two major stories. The first is the above mentioned blurring of the lines in a symbolical sense, it makes it harder to unite a political struggle. The fact that the Oslo Accords divided the West Bank land occupied in the 1967 war into three categories made it more difficult to follow the legal rights: how much land is occupied and what is the difference? The second is the duty of the occupation power. The unified pre-Oslo occupation meant that Israel had to provide services to the Palestinians living on the West Bank. That obligation is repealed with the zoning, since the Palestinian Authorities (PA), created with the Accords, are obliged to provide services (i.e. education, medical service) to all zones. However, the Israelis are in control of security and spatial planning in Area C and thus the maintenance and construction of structures necessary to maintain these services. Numerous are the times when disappointment over the Oslo Accords are brought up in informal conversations with anger towards the own government for signing the deal, although often adding that had the Israelis only lived up to their part the situation could have been different.

## **The spatial planning**

*“They follow us everywhere. Just now threatening us to leave”.* Woman, Bedouin settlement.

Schooling for the children is an example of difficulties arising in Area C, here in the case of the Bedouin family of the Jordan Valley. The family settlement is spartan: a large tent for sleeping and

eating, several smaller tent structures for animal shelter, a water tank and a small cultivated area for production of animal fodder (mainly barley and wheat). They recently moved here. The family got evicted from their previous location because no structures are allowed in Area C without Israeli permission. The bedouin family's settlement was too close to an Israeli settlement and was thus demolished. The family is under constant threat of having to move, even though they have nowhere to go. The Jordan Valley has been their home for as long as anyone can remember, they say. The children go to school in the nearest Palestinian school but the unpredictable check-point sometimes stops them on the way.

### **The choice of crops**

*"People need vegetables. The dates will completely change the culture."* Farmer, el-Jiftlik

Another effect of the Israeli control of spatial planning in Area C are the Palestinian need for permission to conduct construction work and repair work of already existing structures. This type of permission is rarely given. As a consequence, the Palestinian farmers cannot repair their water wells and thus suffer from lack of sweet water. Actually, one way to separate Palestinian villages from Israeli villages is the fact that all Palestinian houses have a black or white water barrel on the roof. However, water is expensive and farming requires a lot. As a consequence, the Palestinian farmers in the Jordan Valley has been forced to largely abandon the growing of vegetables in favor of the growing of dates (image 7). Vegetables in general requires sweet water, while dates can be grown using more salty water. The water wells in the Jordan Valley are usually salty for the Palestinians, according to the el-Jiftlik farmer, Palestinians are not allowed to dig wells deeper than 91 meter and that is too shallow to reach the sweet water. Settler, however, are allowed to and that lowers the groundwater level further. The issue of water is brought up by *every* respondent. *"The lack of water hinders the farmers to grow high-value crops"* the PARC coordinator tells me. The Ramallah farmers has also changed their crops. "We plant what we know" farmer 4 said but added that they had been forced to choose crops in little need of attending. The move towards the growing of dates are bad in several ways, according to the el-Jiftlik farmer and the interpreter, joining in the conversation. Besides the fact that the local culture and landscape changes with the changing of the crops from vegetables to dates, there is also a problem for the local livelihood to secure food supplies for the population. *"How many dates can you eat in a day?"* the Ma'an facilitator rhetorically asks me during the interview in el-Jiftlik.



Image 7. Date farming in the Jordan Valley. Image from <http://www.workaway.info/346935889133-en.html>

## The market

The traditional growing of vegetables and citrus has changed not only due to lack of sweet water, but also due to a changed market. The Israelis have access to the imported market and not as much is at stake, according to both the el-Jiftlik farmer and the interpreter. The Israeli products are cheaper than the Palestinian to buy due to a number of reasons. The lack of water to grow high value cash crops (i.e. vegetables) is also mentioned by the PARC coordinator in Ramallah. She adds that products that are competing with the Israeli product are subjected to impossible controls. Worth to note is that products grown in the occupied territories are required to be marked in a special way according to EU regulations. However, according to the Ma'an interpreter there is an on-going business where corrupt Palestinian middle hands and farmers sell settlement product as Palestinian. Yet another mechanism that is increasing the difficulties to have a functioning Palestinian market are the arbitrary check-points. According to the PARC coordinator products can be stuck in the waiting line for a check-point for hours. The market doesn't only cause women to seek work in settlements; the Palestinian workforce in the Ramallah region settlements are according to the al-Nadha facilitator predominantly men. During the field trip [2016-03-16] we drive up to the gates of the settlement Har Adar (image 9), by the village Katane and Bidu. A long line of Palestinian cars are parked on the street (image 8). I am told workers are allowed in in the morning and out by the end of the work day. If the work assigned is finished earlier, one has to wait. Transport between locations inside the settlement is done by specially controlled vehicles.



Image 8. Palestinian cars parked outside the gates of Har Adar.



Image 9. Agricultural gate, Har Adar settlement.

The market challenges are complex. Selling the products produced is vital to keep the land active. For most, it is an economic decision. Others are able to stay on their land and continue the farming. For those who decide to stay, the statement in itself is the most important motivator. Farmer 6 from the village Tira tells me how they are repeatedly denied access to their land thru the permits needed to cross the agricultural gates in the wall. Rarely, if ever, are permits given during harvests. “*We repeat the procedure every year. To make a protests!*” he says. Farmer 7 calls it “fight by planting” and says that Israel keeps removing plants from the strategically important land, but that he keeps re-planting. Much of the work done by the organization PARC is to provide help in cultivation, to give people good reasons to stay on their lands despite the fear, explains the PARC coordinator. On the field visit (2016-03-16) in the village Katane I could observe fields adjacent to the gates of the Har Adar settlement where olive trees ones stood but that were uprooted when establishing the settlement. (image 10 and 11) The frequency of violence varies, as does the reasons. In the middle of the group interview one farmer from the village Mughayir leave to go back to his village, since he just got notice of that an NGO had the possibility to assist with protection, while the farmers plough their plots. The strategies also function as a way to keep traditions and memories alive. The head of Savings and Credit Ramallah told me how saddened she was not to be able to raise her children, free on their land, as she herself was raised. She also tells me about how it took her several attempts to make herself by an orange at the market after her land had been seized to build the wall.



Image 10. Empty terrace below Har Adar settlement. The trees were removed when the settlement was built.



Image 11. The Har Adar settlement from a view.

### **Physical barriers: the Wall, fenced and permissions**

Some manage to stay and farm their land as a protest even though the farming doesn't give them income anymore. Others leave. “*Confiscated is a better word than abandoned*” the PARC coordinator tells me in a preparatory interview. There are a number of factors leading up to this “forced abandonment”, many are related to the physical restrictions of the barrier wall. To pass the wall there are a number of “agricultural gates” but to pass the gate a permission is required. According to the farmers present at the group interview (2016-03-13) the permissions are given individually, even though the farming of the field is rarely considered in the terms of individual labour, but rather as a

family business. The head of micro loan organization Savings and Credit Ramallah tells me in our interview that the court issued a permission to her dead uncle. Farmer 8 from Beit Idza has his entire house locked in by a settlement. The family gets permission to work some days each month, but not continuously. The house is locked in by the separation barrier, controlled using electric fence, cameras and more. To reach the house the family has to pass the gate. Relatives must have permission to visit, acquired at least 1 day before. After three months of being completely locked in, the media reported intensely on the case and an Israeli court rules that the gate has to be open 24 h. However as soon as anything happens, on the West Bank or in Gaza, they shut it. The Beit Idza family has a very particular situation, although not all that unusual. On a field visit to the village Katane my guide showed me another family in the same situation, locked in behind the settlement of Har Adar. The family had been offered a blank check when the settlement were being established but they had refused to move. Farmer 6 from the village Tira is given permission to harvest but never during harvest season. Farmer 1 from Mughayir explained to me that permissions are given for the specific season, e.g. the olive season. If the farmers show that they have other trees (e.g. almonds) on the land they only get permission for one sort. If they do harvest almonds anyway they are forced to throw it away. Farmers 5 from the village Budros tells me how he usually gets a four day permission to harvest olives, but that the permission is usually handed to him on the fourth day. 1 dunum (0,1 ha) orange trees needs about a week to harvest. *“How can it be done in a few hours and only by the older woman”* he exclaimed, after having told me that the permission to cross the gate was given to his grandmother. The story is supported by farmer 3 from the village Rantis who describes how the permits are only given for pick up time and only for women. The time needed to care for the trees in different ways is not permitted. In addition, farmer 8 and farmer 1, both from the village of Mughayir, had their trees destroyed (160 for farmer 8, 700 for farmer 1) by injection of poison. Noteworthy is how the reality described by the farmers doesn't match the official regulations. As in the case with the four day permission for farmer 5

## Gender

There is a gender aspect of the changes in land use and market. The El-Jiftlik farmer tells me that one important incitement to keep women farming their own land is to keep them away from the (Palestinian) middle man transporting them from the village to the settlement. Sexual harassment is a big problem. The fear is great for unemployment. *“It is male society”* she tells me and explains that it is difficult for women from the traditional villages to find work. Another aspect of the transport from the village to the settlement farm, beside the sexual harassment, is the increase in workload. The women are still expected to run the household meaning that they have to get up at 3 a.m. to get everything ready and be on the farm on time. The head of micro loan organization Savings and Credit Ramallah tells me that there is a trend towards a more traditional society, which she connects to the general insecurity of the situation. She says that this trend is not specific for Palestine but is happening in Europe and North America as well. In the Palestinian context, she says, the women are tied closed to the house and more women have started to wear hijab - an observation also made in

informal conversation by a female friend from Ramallah. However, fear is not bound by gender. In fact, it seems fear is a factor in all the regions.

## **Fear**

*“If somebody comes, and they break his bones. Nobody will come again, even if there is no concrete wall, yani”*, interpreter PARC

Fear of settler violence is one of the most frequently occurring topics brought up, both in the interview sessions and in everyday conversations. A Palestinian PhD student doing research on landscape perceptions I spoke to told me that she was often very frightened when she was out in the field. She felt very uncomfortable seeing the settlements. The perceived dangers are more often the armed and religiously driven settlers than the military, even though they are also invoking fear. As the politician in the Jordan Valley put it *“The smallest Israeli soldier can tell our President that he can’t move”*. Carrying a gun is legal and common in the settlements. A fear of stones being thrown are also mentioned. The checkpoints are tight and often crowded. For example when traveling from Ramallah city to Jerusalem one passes the Qalandiya checkpoint. Young people are asked to leave the vehicle and pass thru tight fenced pathways while older and (sometimes) internationals remain on the bus for passport control. Two militaries board the bus with the semi-automatic standard rifle of M16. In my experience, the situation is pressing and very unpleasant. Passing the Beit El DCO checkpoint, leading out of Ramallah to adjacent Area C land, on our way to conduct field interviews in the Jordan Valley meant passing a rifle mounted on a stand in head height. At least for me, this experience was upsetting. The Beit El DCO check-point is usually open, but a Palestinian stabbing attack on a Israeli military the day before had caused the check-point to be manned, according to my interpreter. The headline quote is a sum-up made by the group interview translator, after a group reaction to my question on different forms of barriers.

*“The Israeli army came and arrested the sheep and took them to other places, far away”*  
farmer 4, Ramun village.

Most of the West Bank land consists of terraced, hilly moors without noticeable demarcation. The herders cannot always be sure where the land he/she is allowed to graze ends. Farmer 4 describes how his sheep wandered away over to the military zone and was “arrested”. The sheep was later returned in a brutal fashion, where the pregnant sheep lost their fetus and other broke their bones. The military charged a fee of 7 dollars per sheep to be returned. The family of the Bedouin settlement in the Jordan Valley also mentions the fear of having animals wandering too close to the settlements of the military zones. *“I keep my cow just around the house”* he says and adds that the children of the family are forbidden to pass the road (approximately 5 meters from the tents) because of fear of settler violence. If they have to go, he will always join them.

## Military zones

*“We are watching how they are expanding! Before there used to be a military zone, but we can see how they are building settlements!”* man, beduine settlement.

The fear also comes from adjacent military zones conducting practice with live ammunition. The farmer from the village El-Jiftlik in the Jordan Valley tells how the two adjacent military bases sometimes practice very close to the village, and sometimes they practice in the village itself. The women have to stay up with the frightened children. A similar story of military practice that scares the children is told by the woman of the Bedouin settlement. Military zones also an efficient way of claiming land, for security reasons. However, the zones assigned are not always used as such. The above quote is from the father of the Bedouin settlement. The family were forced to move under the pretenses of a military zone, but he says that he can see how the military structures are gradually changed into houses for living. I am told that there are two types of military bases, where the second one is a place where the families of the militaries comes to live. During our field visit in the Jordan Valley we could repeatedly see how land assigned as military buffer zones between Israel and Jordan was in fact used for agriculture.

## Section two, in which the results are supported by land use interpretation\_

In order to give depth to the following discussion on the changing Palestinian landscape I will in this section present classified imageries over two of my study regions; tracing the stories. Following the theoretical framework of the power embedded in depicting and interpreting landscape I have done two sets of interpretations. In this section I will show images from the village el-Jiftlik in the Jordan Valley (image 12) and the neighbouring villages of Katane-Bidu-Beit Idza in the south Ramallah border region (image 13).

The images are processed using two online platforms: Google Earth Engine (hereinafter GEE) and Choros Mapper (hereinafter CM). **The GEE analysis** is made using spectral classification, meaning that each pixel is classified as an individual pixel. A Landsat scene over the region from 2014 is added to the workspace in GEE and a set of training areas in the form of points and polygons are provided for each land use type and a supervised classification is performed. When the classification is completed, two additional Landsat scene is provided from year 2005 and 2014. The classification uses the same training areas. **The Choros Mapper analysis** is made using contextual classification; each picture takes its surrounding into account. Base image are gathered from Google Earth and follows as closely to the GEE timeline as possible; year of image vary depending on availability. Two images are chosen. This decision is made following the fact that the contextual nature of the analytic tool means that the images are not possible to compare. This is also the reason



why the colors of the images vary: visible in the images are a new context and therefore also a new composite of land use. In the image pair 2C and 2E similar colors are chosen. This is because the images give a rather interesting result and this is more vividly shown using similar colors. The contextual classification is made using the following settings: 6 classes, 16 smoothness, 100 radius. The Choros Mapper images are more detailed than the Google Earth Engine images because the CM tool allows for a limited amount of pixels. Each location is presented with a detailed map of the political zoning; image 14 and 15.

The structure of the following presentations is:

El-Jiftlik: the Jordan Valley

Google Earth Engine classification: 1A, 1B, 1C

Choros Mapper classification: 1D, 1E

Katane, Bidu, Beit Idza: The south Ramallah border region

Google Earth Engine classification: 2A, 2B, 2C

Choros Mapper classification: 2D, 2E.

Summary



Image 12. Aerial photo over El-Jiftlik in the Jordan Valley. Image retrieved from Google Earth, image date 2014-10-21. © 2016 Digital Globe/2016 CNES Austrium

Image 13. Aerial photo over south Ramallah border region. Image retrieved from Google Earth, image date 2015-01-30. © 2016 Digital Globe

**EL-JIFTLIK: THE JORDAN VALLEY**



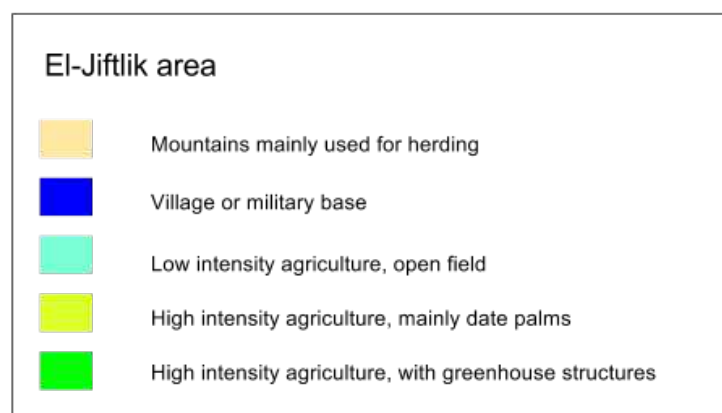


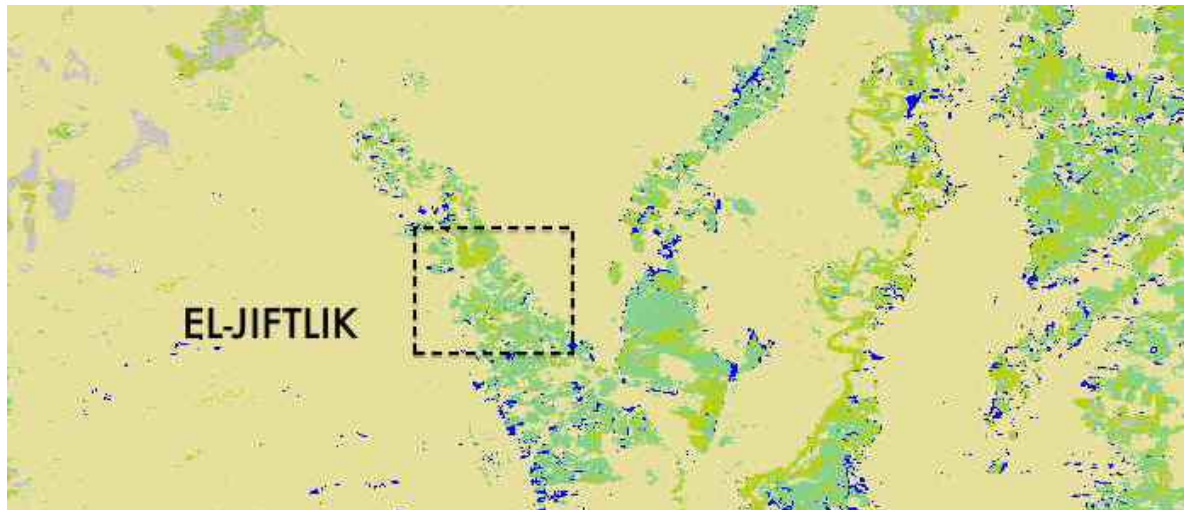


Image 14. The political zoning of the village El-Jiftlik in the Jordan Valley.  
<http://www.btselem.org/map>

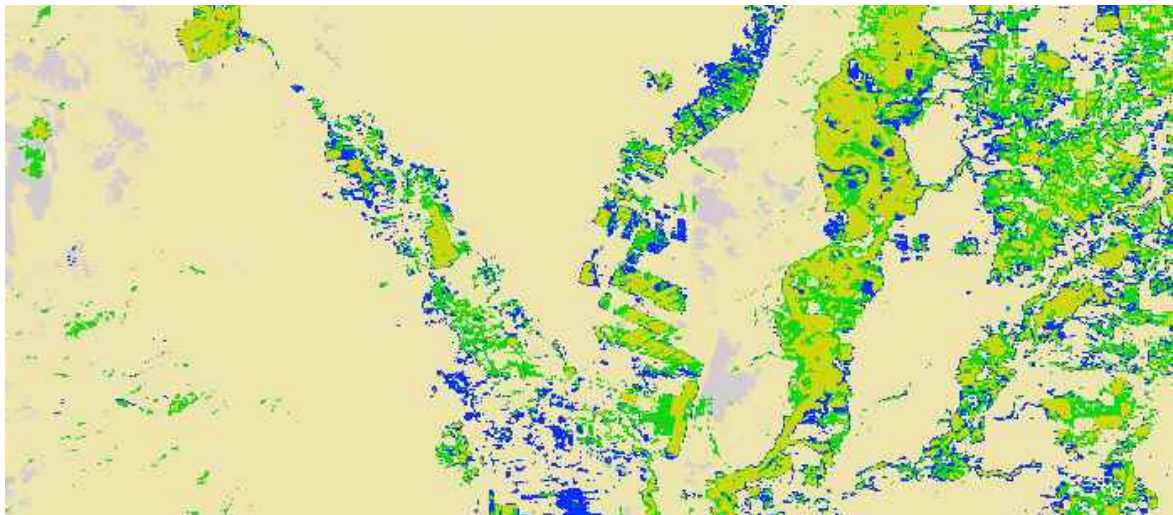
#### Google Earth Engine classification: El-Jiftlik

Images 1A 1B and 1C are spectrally classified using Google Earth Engine. They represent A=1999, B=2005, C=2014. The pictures show the el-Jiftlik village and a section of the surrounding Jordan Valley. The large scale Landsat scene allows for an interpretation of the stories pertaining to the regional scale: changes from vegetables to dates, cultivating the military zones of the Jordan river. Comparing the images we can see that the intensity of the land use has changed from low intensity to more highly intense palm tree farming or greenhouses. This largely follows the told change from vegetables to extensive fields of date palms. One interesting change in the images from 1999 and 2005/2014 is the increased agriculture in in the field just by the (dried out) Jordan River. This area was explicitly seized for military purposes.

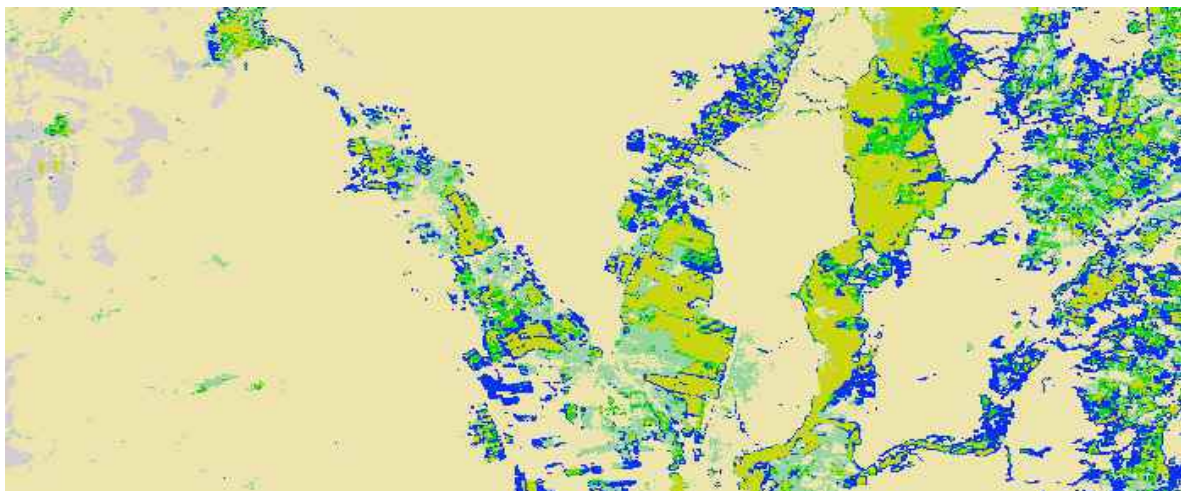




1A. El-Jiftlik 2000. GEE Classified. The square shows the village El-Jiftlik and corresponds to the images shown in the Choros Mapper classification (1D and 1E) and the above image 14. The area is largely farming vegetables. The lime green meandering line is the Jordan Valley/the border to Jordan – still more or less uncultivated.



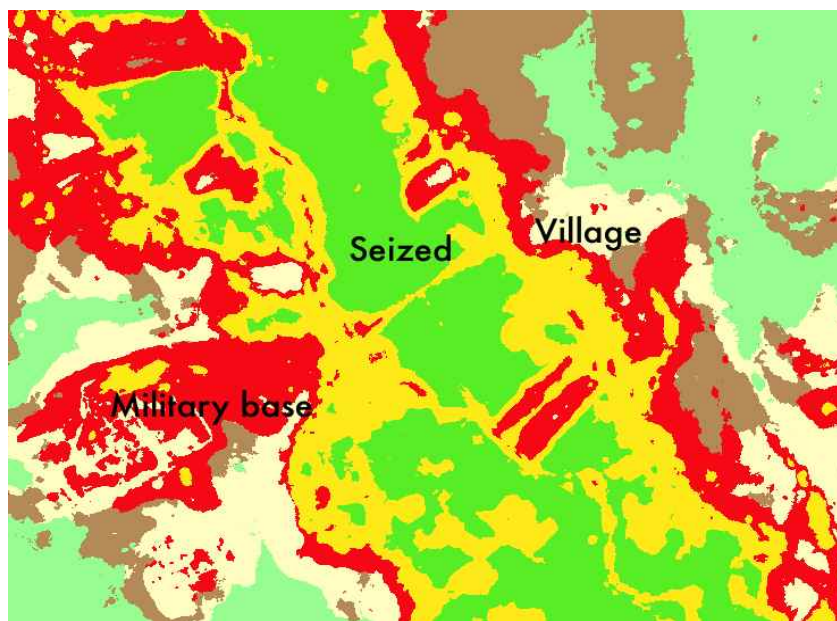
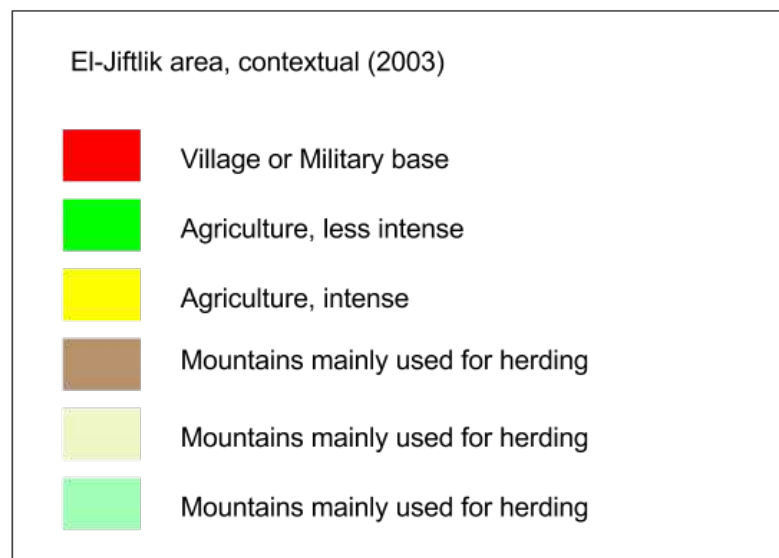
1B. El-Jiftlik 2005. GEE Classified. The large patches of beige is probably due to quality of the Landsat scene provided by GEE. However, a remarkable change has taken place in the Jordan River/border to Jordan. Suddenly, the area seized by the military to function as a closed area is being cultivated.



1C. El-Jiftlik 2014. GEE Classified. The village El-Jiftlik is being increasingly intensively farmed. A blue structure has appeared in the lower left corner (look at the square marked in image 1A). This is a military base.

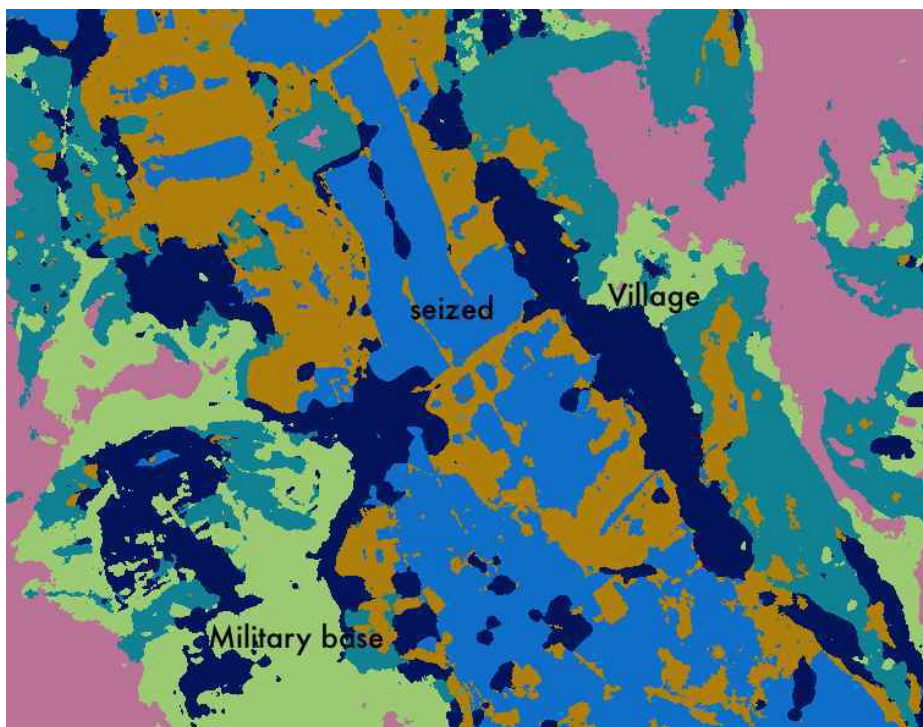
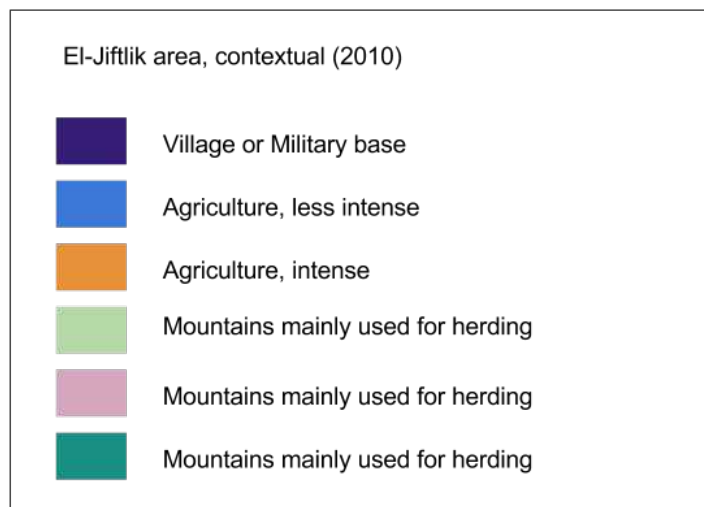
### Choros Mapper contextual classification: El-Jiftlik

Images 1D and 1E are contextually classified using Choros Mapper. D=2004, E= 2010. The images correspond to the area marked by a square in image 1A. Using the small scale of the Choros Mapper tool allows for interpretation of the local scale stories: the building of a military zone and the patch of land seized by Israel. The images single out intensive farming, less intensive, village structure or military bases and several shades all corresponding to mountains. The mountains show various colors due to different level of aridity as well as sunshade. What is not distinguished however is the area marked in 1D and 1E as “seized”. This area is currently occupied by Israelis who are growing date trees here. This is not traceable in the images.



1D. El-Jiftlik 2003. CM Context. The CM tool does distinguish between various types of agriculture and it does single out urban structures. However in this local scale, the most important story is the new military base and the land that will be seized by Israel in 2016 (marked as Seized). The tool does not single out this land as anything different from the rest.





1E. El-Jiftlik 2010. CM Context. Tool still does not single out the soon to be seized area.

## BIDU, BEIT IDZA AND KATANE: THE SOUTH RAMALLAH BORDER REGION

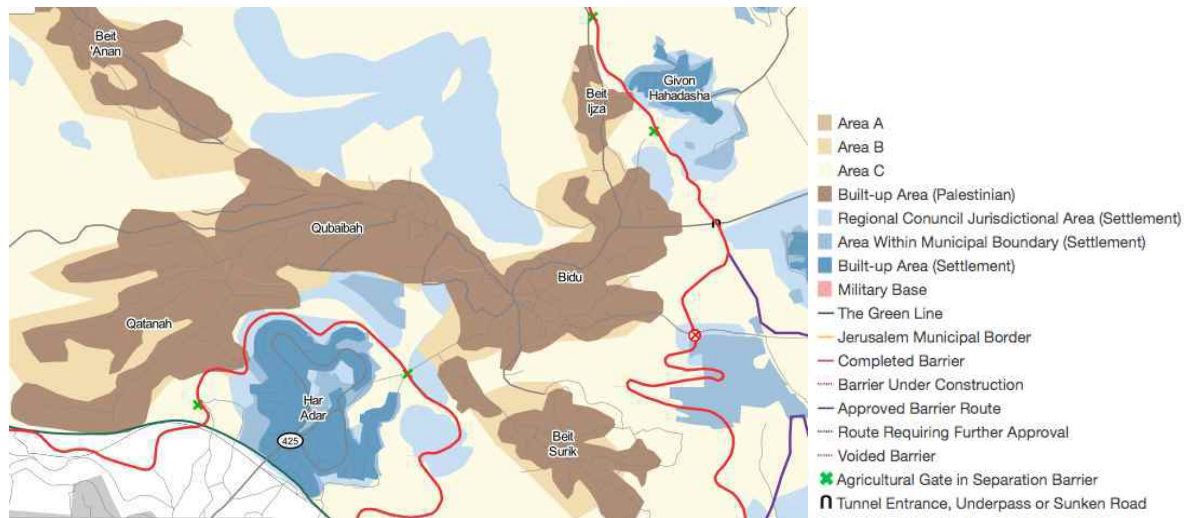
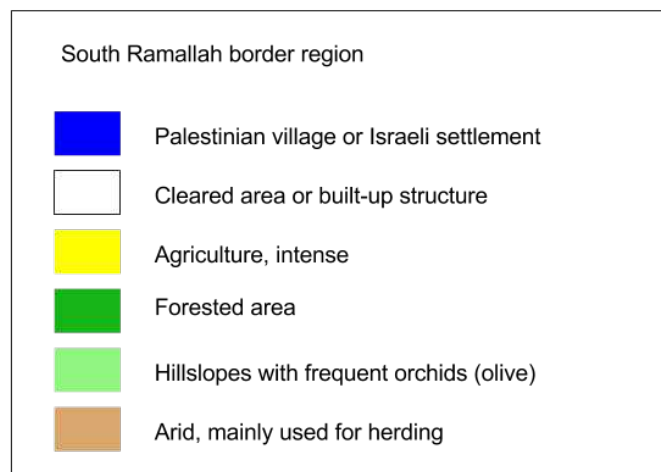


Image 15. The political zoning of the south Ramallah border region.

<http://www.btselem.org/map>

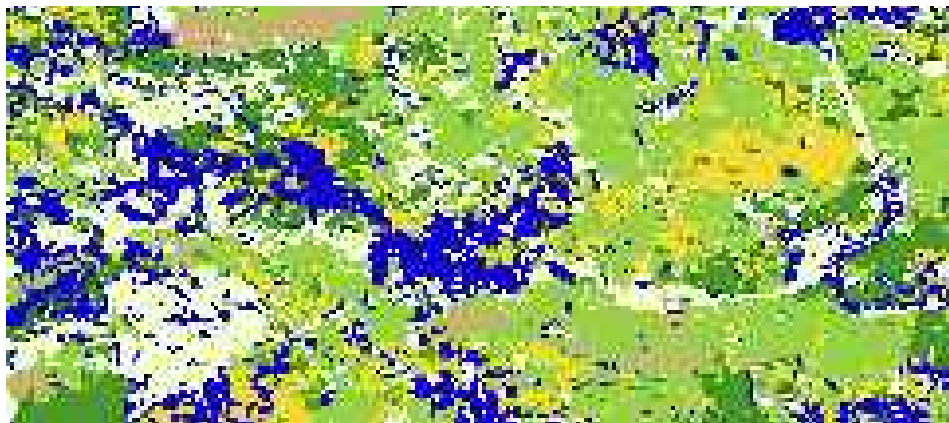
### Google Earth Engine classification: the south Ramallah border region

The images 2A, 2B and 2C are classified using Google Earth Engine Express. A=2000, B=2005, C=2014. The images show the villages Katane, Bidu, Beit Idza and the Israeli settlement Har Adar and Giv'on Hahadasha in the southern Ramallah area border region. In image 2A, a white patch is clearly visible in the mid-center. It corresponds to the settlement of Har Adar. The settlement was not yet developed in 2000, but the area was cleared why it appears so brightly. Arching over the settlement is a blue area consisting of villages Katane, Bidu and Beit Idza. Patterns suggest that the emerging of the barrier wall and new roads and settlements has created an overall scattering of the landscape, the Palestinian land use has shifted to a more dispersed use.

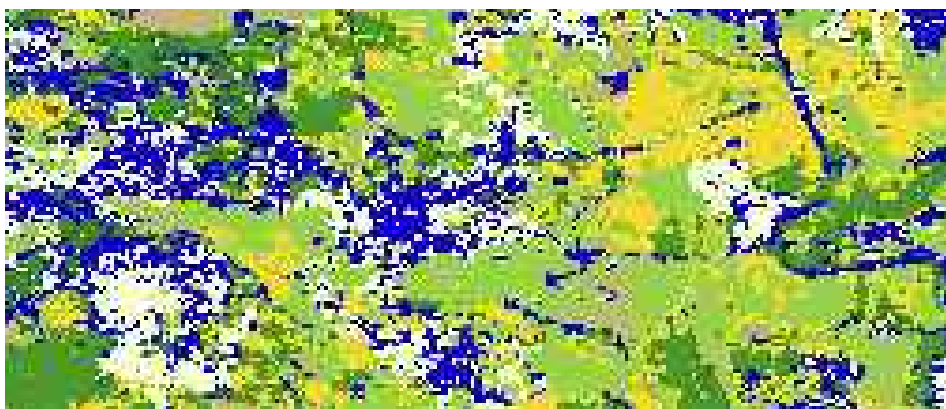




2A. South Ramallah border region 2000. GEE classified. The bright white patch is the soon to be densely populated settlement Har Adar. The blue strikes are roads, their legal status in 2000 is unclear. In 2016 they are off limit to Palestinians.



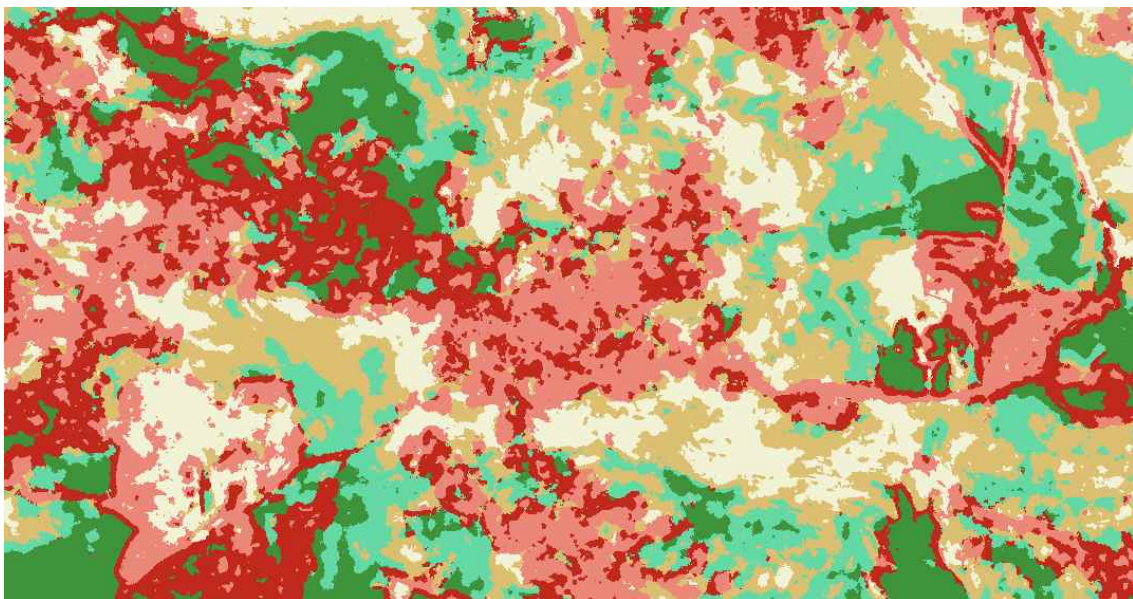
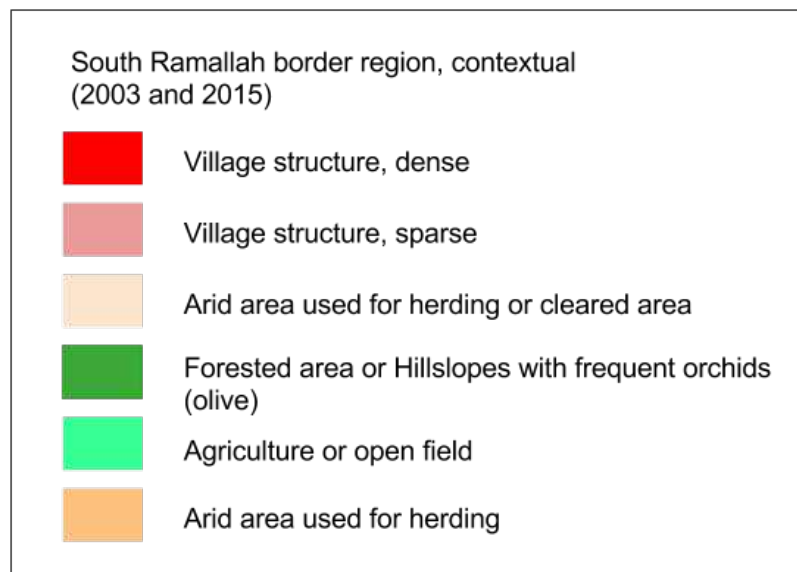
2B. South Ramallah border region 2005. GEE classified. The structure is changing in the Har Adar settlement and adjacent Palestinian villages. Palestinian farmland around Beit Idza is increasingly used for housing or cleared of trees, showing a white color.



2C. South Ramallah border region 2014. GEE classified. More blue strikes has emerged. Interestingly, the clear structure of the separation wall that is encircling the Har Adar settlement is not visible.

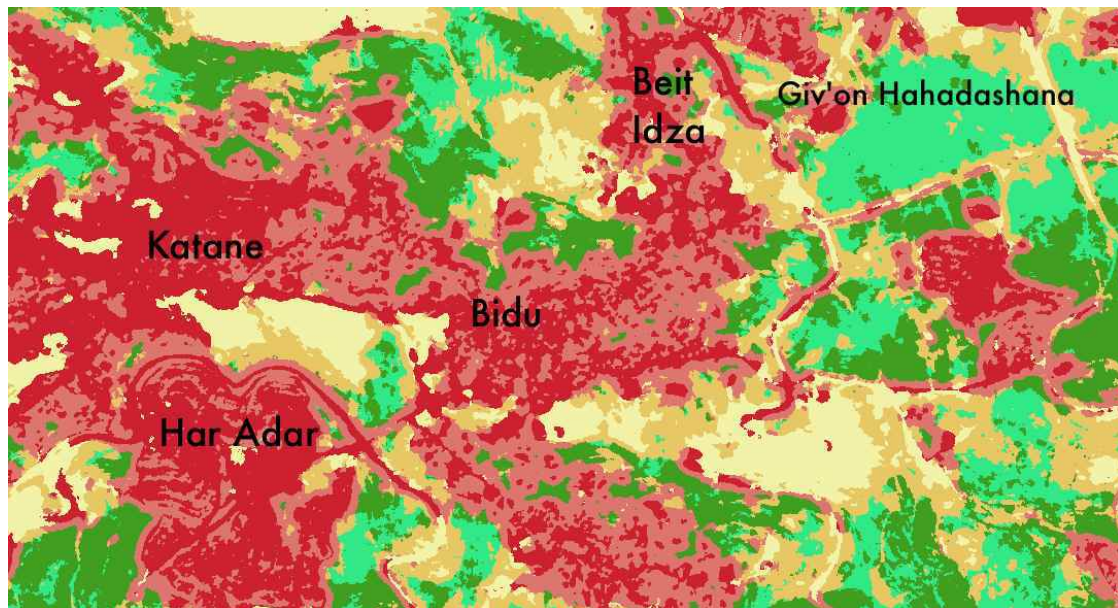
### Choros Mapper classification: the south Ramallah border region

Images 2D and 2E are contextually classified in Choros Mapper. D=2003, E= 2015. Base image are gathered from Google Earth. Year of image vary depending on availability. Because of the contextual method the images are not possible to compare, however they are interesting in how they so clearly mark the sprawl of built up area (red and light red) and how the most cohesive areas correspond somewhat to the Israeli areas is image 15. I have chosen similar colors for this pair of images to make the analysis clearer. The images show a visible change in land use structure; the images from 2015 show a parceled land with more clearly divided forms of use as compared to 2003.



2D. South Ramallah border region 2003. CM Context. Village structure and land use for agriculture is scattered but with some cohesive patterns, compared with image 2B from 2005 (above).





2E. South Ramallah border region 2015. CM Context. The image manage to capture the compartmentalized structure, the new logics of the Palestinian land. Each section is tightly kept, separated from its surrounding.

### Summary

The Google Earth Engine (GEE) spectral classification made large scale changes in the Jordan Valley traceable; the information given in interviews made it possible to sort out a timeline pattern depicting the local development story. The Jordan Valley Choros Mapper contextual classification provided less useful results, largely due to the fact that the story of the Jordan Valley is told in a larger scale than what is possible to process in the Choros Mapper tool. On the local scale, the processing did distinguish between intensive and less intensive agriculture but the local story of military bases and land seizure is not possible to single out. The Palestinian land use in the Jordan Valley is decreasing while the Israeli industrial agricultural land use is increasing rapidly. When moving the analysis to the South Ramallah border region an interesting contradiction emerges from the patterns. The GEE image set shows a development that seems to support the opposite of the development visible in the Choros Mapper; the GEE images shows a land use that is increasingly scattered while the CM images shows a land that is increasingly parceled. Both sets of images show how built-up structures are spreading over the other types of land uses. Not very visible in the GEE image set is the emerging of the wall and the roads leading up to the Giv'on Hahadashana settlement. Therefore, the scattering of the land in the GEE image set is difficult to decipher and interpret, even though it is probable that a scattering has occurred as a consequence of the Israeli presence. In this regard, the CM image set has an advantage over the GEE, in that it shows the landscape as parceled. True, scattering is visible in the CM imagery as well but what is most notable is the parceled compartmentalization. The systems of roads, settlements and the separation wall cuts up the landscape and scatters it within the new land pockets. The imagery therefore shows the same development but with two different processes in focus. The spatial pattern of the south Ramallah border region land use follows a logic of Israeli hilltop settlements, connected with exclusive roads, protected by the wall. The Palestinian land use is allowed to exist in the assigned pockets, left over by the dominant Israeli land use.



# Discussion

The Palestinian landscape is changing; in this thesis I have had focus on two areas to exemplify the remoulding of the land. I have asked myself what processes are active and why. The first and foremost active process is the process of a land seizure versus land loss. The land used and/or land controlled by Palestinians are shrinking; the mechanism involved is a joint act of abuse and legal ingenuity. The constant hook in a juridical framework makes the case of the Israeli occupation of the West Bank a intriguing field of research; the scene of study is dynamic, processes complex. Possibly the best way to analyze the plethora of history, religion, nature, politics, violence and law is to counter with an equally rich voice based on theories and data. This has been the intention of my thesis. Hopefully, it will help me highlight a set of key conclusions to be drawn from the material. The remodeling the Palestinian landscape is an ongoing process, linked in the history religious claim. Not aspiring to find a starting point, I have instead singled out a number of phenomenon that hold extra relevance in my analysis. Having thousands of years as a backdrop, my analysis starts with the classification of land undertaken by the Ottoman empire, resulting in the 1858 Land Code.

## **Functions of territorial power**

In the Academic scope a brief overview is provided of Foucault's (1978) ideas of how power can be either general/territorial or individual, how the emergence of the institutions of discipline combined the two using binary classifications, and how with the help of registers, data gathering and surveillance it became the way a modern state exercise discipline. This relates to Israel/Palestine in a number of ways; the region is a prime example of where territorialized power meets de-territorialized power. If one is only looking at the physical barriers, the real exercise of power goes unnoticed.

The power embedded in the landscape of the hilltops is a contemporary expression of the surveillance politics of the Ottoman empire, resulting in the classification and subsequent dividing of the land. As the quote from Polk reminds us "The Palestinians lost their land long before the Balfour declaration" (Polk et al., 1957). Recall also the analysis made by Olwig (1996) on the effects of the geometric drawings and mapping, that in combination with the economic system of merchant instead of barter, turned land into a divisible commodity. Could it be possible that the division of the Palestinian land in the Oslo accords made the land seem breakable? Can the detailed mapping that is constantly scrutinizing the West Bank (Wallach, 2011; Schnell and Leuenberger, 2014) somehow contribute to a perception of the land being not a whole but a jigsaw puzzle? The parcelling of the landscape has indeed created a territorialized land (Handel, 2014) where the constant feeling of being under control is generated by the visual presence of hilltop settlements and the unpredictable check-points. So how can we understand the spatial power in the landscape? As is visible in the images on pages 47-55 (Results), the landscape is changing cover; the choice of crops is changing and land is transferred from one ethnic group to another. Not visible in the images, but in the testimonies and theories are the changing architecture of the Palestinian villages, from traditional styled houses to

European red-tiled roofed houses, significant for the settlements (Weizman, 2007). Should it be understood as a form of conscious protection from oppression, or is it a resignation, a non-struggle over a landscape already lost? “We already lost the war” as a respondent laconically put it, in a conversation on the ongoing fighting between the Palestinian youth and the outposted Israeli militaries. Possibly, an adaptation. Using the Foucauldian idea of spreading the institutionalized discipline to the society as a whole using dichotomized labels of dangerous/harmless, sane/insane, free/unfree, it doesn’t seem unlikely that the new form of architecture is a way of allying with the power. What Weizman (2007:130) calls “architectural mimicry”, i.e. how the new Palestinian villages and suburbs emerging along the hillsides copy the architectural style of the Israeli settlements, could be perceived in the way of normalizing the occupation by internalized colonialism. In the dualism created by power of good/bad, Arab/Jew, criminal/citizen (Foucault, 1978:199) it would seem a reasonable conclusion to draw, that one sides with that category which is not synonymous with restrictions. As Alatout (2013:609) in his reading of Foucault by Foucault (Foucault, 1980:69) categories creates spaces, and therefore one wants to affiliate oneself with the category that is “outside the wall”. Another way to interpret the copycat style of the new villages is safety in a more direct sense; the red-tiled roofs as mimicry in the sense of physical protection from being seen by the predators - in this case feared attacks from the Israeli air force in case of war (Weizman 2007:130). Mimicry can also be understood in a more individual, human micro-perspective, using the orientalist framework; the cultural mimicry (e.g. appearance, behavior) is required from the dominant ethnicity but the “other” can always only be second best since they still will belong to the ethnicity of the “other” (Harris, 2014:803). It could however, very well be the fact that a European style house is simply modern, following a worldwide pattern of middle class suburbia.

It seems though, thru my interviews, that the new style is bothering some; it causes feelings of fear and anger to witness it. It reinforces the power of the hilltops; the “archipelago” of the Israeli system to paraphrase Foucault. The constant dynamics of the border regions, making up the frontier landscape, is an example of how territory is floating and almost non-acknowledged; there are rarely headlines when the border is pushed into the Palestinian territory. Further, the Kafkaian procedure, described by all the Ramallah farmers, of getting permissions to pass the agricultural gates of the separation wall adds not only to the difficulties of cultivating the land but also to the confusing functions of power. There is not a coherence between what is stated by the Israeli system of courts and the Israeli military. This causes the perfect conditions for power and dominance - it is at once visible and invisible. It is tangible but verbally denied.

### **The dynamic of the front**

The process of the contested land is pulling and stretching the landscape based on perceptions of ownership of land as private, common or state, rooting back to the Ottoman time. The Ramallah border region is a dynamic frontier landscape. The everyday decision of the farmers to keep planting is a strategy for laying claim to land. The farmers are explicit about their political agenda. Keeping the land farmed is necessary in order not to have it seized under Israeli law as abandoned state land.

Aerial photos are a common method for the claims of abandonment. Remembering the note by Ashley and Knapp (1999 ) I would like to move the discussion up to a higher level of abstraction, to the notion of landscape as social order and the remark on how “to be absent from the natal landscape is to lose one’s moral bearings” (1999:16). Keeping the land farmed is a way to keep dignity and social cohesion. Women fear sexual harassment on the transport to the settler farm. Men face humiliating work conditions in the settlement around Ramallah region. The struggle to keep the land cultivated seems two-fold. It is one the one hand a heavy responsibility resting on the individual Palestinian farmer to keep the national border in place. The wall wobbles, twists and turns after the established settlements. It is also a way to keep one’s place in the social network: the culture of the farmers is strong. The farmers express that farming is a lifestyle. The head of micro loan organization had to give it several tries before she could bring herself to buy oranges in a shop. There is an individual sacrifice involved in modeling the landscape, or rather, in stabilizing the shape. In this way, the Palestinian landscape is one where the human sphere has molded with the physical interface of the landscape, as if myths and stories of war, displacement, loss has dissolved the atoms of the humans and the physical features of the land and turned it into one. This fusion is also the process that turned the hilltop settlements and its inhabitant settlers into prolongation of the topography. The hills are claimed and the new human hills claim even more: they act as system of surveillance and dominance thru mere visibility over the land. Effects of the frontier landscape is visible in the images; the access to cultivate and care for one’s land is hindered and the choice of crops are changing. Land is scattered and parcelled by the emerging roads and walls.

### **The blurring**

The plethora of maps showing lines and areas of the numerous different ways a land can be governed is a political tool to counter the occupation. They do, however, make it obvious that the strategy of ambiguity is effective. There are area A B and C, there are built up Palestinian areas, there are military zones, there are nature reserves, there are area H1 and H2 in Hebron (Palestinian versus Israeli control), East Jerusalem, forbidden or not forbidden roads and refugee camps. As the politician in the Jordan Valley said, “before, everybody *knew* Israel was colonizing”. The not uncommon choice to work in a settlement or in a settlement farm could be seen as part of the process of neutralizing the step by step take over. The relationship is changing character from occupier-occupied to employer-employee. The gates in the barbed wired fences around the Har Adar settlement next to Katane and Bidu open and close for Palestinian workers at a given time in the morning and at a given time in the afternoon. Before, after and in between they keep shut. According to the al-Nadha facilitator, the Palestinian workers are not allowed to move freely between the houses in the settlements but are driven by car, minimizing integration. The work conducted by the Palestinians in the settlements are part of the reworking of the soil, deepening the roots of the occupation. The gap between losing one’s land and keeping it can, put drastically, be seen as being part of two counter forces, each trying to stomp, plough and sow as much land as possible. Each side is trying to fulfill their own embodiment

of the landscape as either Arab or Jewish, creating a constructed landscape of farms, fences and terraces.

The market is also subject to a large degree of blurring. It is partly due to arbitrary controls of Palestinian products on the Israeli market, as many are witnessing about and partly to the problem of corrupt Palestinian middle hands, wrongly marketing products from the Israeli settlements as Palestinian. Seen in the light of the theories of neutralization put forward by Handel (2009), this is another way of blurring the occupation, only performed by the Palestinians instead of the occupier. Most likely, as also suggested in interviews, it is a question of individuals making choices. However, the structure of Palestinian blurring of the lines is recurrent; as for example in the case of the architectural mimicry of the new-styled villages. It clear that the processual change of the landscape is a dual force, however, in my reading stemming from imaginary geographies, projected on the land from a Western gaze; an orientalist gaze.

Yet another form the blurring takes is the way of the road system, with its different forms of restriction and checkpoints, mushrooming at any point. The bedouin family has a hard time getting their children to school since they are depending of a bus driving past a frequently, but arbitrary, closed checkpoint. This doesn't only add to the blurring, but also to the Palestinian time-space where the educational system are equally dependent on the roads as is the market and agriculture.

The concept of landscape is sometimes understood as a "common sense term" (i.e. Ashmore and Knapp, 1999). However, echoing the notion of "constructed blurring", the Palestinian landscape is an excellent example of when common sense is a political tool. The contested piece of land has been consciously dressed and re-dressed in coats of various forms of "nature" in order to neutralize the claim (Falah, 1999; Said, 1999; Harris, 2014; Alatout, 2006; Long, 2008), partly because the common sense conclusion when seeing a piece of land covered in a full grown forest is ideas of long time historical use and thereby rights.

### **Time-Space: from history to current market**

The Israeli/Palestinian time-space is perhaps the most prominent aspect of all. It is interwoven in every process taking part in the landscape change. The Palestinian landscape is both stuck in a thunderstruck form, never truly allowed to move forward in time; the refugee camps with their inverted time and constant need of having one foot in the past, in order to not let go of the claim to return; the constant excavations of the holy past. In the same time: a radical change in the current landscape! The farmers of the Jordan Valley are moving from vegetables to date palms, the Jordan Valley border land is being cultivated, the Ramallah region farmers are seeing more and more land turn fallow behind walls impossible to penetrate and prohibited roads. The inherent demands from the soil itself to be cultivated, in order to not be confiscated. And then there are the roads, that parcels the land and turns the Israeli time-space into a cohesive, effective, rapid landscape, while simultaneously turning the Palestinian into a fragmented, slow, scattered (Handel, 2014) multiplied landscape. Ironically, what seems to be happening is a coming true of the prophecy condemned by the orientalist gaze of an undeveloped, slow, Palestinian population. The process of power creates a circular effect

on the landscape with depicting and realization at each end, just as described by Olwig (2005). The system of the road and the subsequent time-space is obvious in the economic market for the farmers. They witness of impossibilities of keeping the business going, because they never know when a check-point will close, causing the product to spoil. The demand to keep the soil cultivated is not only legal but socio-cultural. The farmer witness on a farmer's mentality and lifestyle, some sleep on their land to protect it. They tell me about the local product belonging to a certain region, not only in a biologist way but also in a more profound way. A woman raised concerns about the upbringing of her child, without access to free land the way she had as a child. She has to invent a new upbringing. In this perspective the time-space also holds the future.

Related to the results of the particular Palestinian time-space is the stratified landscape, where the past is not past tense but a contemporary player, making it more relevant to talk about a landscape shaped by history determinism instead of environmental determinism (Olwig, 2002; Weizman 2007). The way the environment is laid out is in the Palestinian context an object, rather than a subject. What is described by Long (2008), Wallach (2011), Falah (2013) with the planting of forest in order to re-create the landscape and rooting dreams and politico-religious ideas can also be said to be performed everyday by altering the Ramallah region and Jordan Valley landscape with new type of housing and agriculture.

Further, the spatial planning of Area C keeps Palestinian villages stuck in a rural type of distribution and spatial logic. While the settlement agriculture is moving fast towards large scale high-technology farming, the Palestinians are kept in conserved rurality. This is never as clear as in the case with the bedouin family who are on the constant move due to the prohibits on building new “structures” in Area C. Their way of life leaves very little visible tracks on the surface, making it difficult to trace them in imagery.

## Conclusion

The Palestinian landscape is shaped by a colonial gaze. It is a landscape where power is embedded in vegetation and topography, by roads, parcelling, reforestation and hilltop settlements. Stories explaining current land use is traceable in satellite images using grounded knowledge; the initial methodological aim of this study had to be revised and interpretations based on both a relational (Choros Mapper) and absolute (Google Earth Engine) was used.

The way a landscape is interpreted and depicted shapes the organization of the landscape in a constantly ongoing process. In this thesis I have shown that the modern Palestinian landscape has historically been, and is currently being, organized in a way that is linked to the interpretation and subsequent depiction based on an Orientalist gaze. This interpretation of the landscape holds ideas, fiction, projections, holiness and diaspora. The depiction is therefore always affected by the

interpretive gaze and is materialized in maps, myths, narratives, photographs. As is shown in the example of the foresting, the water regime, the mapping of shrub land and state land, the depiction results in a changing landscape. In this thesis I have also shown that recently available online platforms for geoprocessing allow anyone to make quite advanced analysis based on their own interpretation. Our interpretation of the landscape is depending on where in the landscape we are; our social status, our power. Following the mirrored theories of landscape change and image analysis I have acquired contextual knowledge of the intention behind the spatial configuration of the landscape and I have analyzed it using geospatial tools based on a semiotic, interpretive reading of the landscape as a social space. Based on localized knowledge I processed the images (satellite and aerial) in a way that depicted land use from a Palestinian perspective. The interpretations of the landscape are shaped by occupational power, diasporic dreams, memories and everyday experience, thus depicting the Palestinian ideas of value and sequence. Following the circular logic described in Background and Academic Scope this could hypothetically have an effect on how the landscape is re-interpreted and organized.

Using the two differing methodologies of image classification and interpretation has allowed me to depict the Palestinian landscape in a way that finds support in the theories of a changing landscape and in the experiences described by the respondents. With the help of empirical data, theories, gray literature and online maps I have provided myself with available information of the spatial configuration and intentions. In the south Ramallah border region, the Choros Mapper (CM) tool actually did make it possible to single out a local story not otherwise visible aerial photos or spectrally classified images. Importantly, the imagery (GEE and CM) showed the same development but with two different processes in focus: the scattering of the landscape and the subsequent compartmentalization. The Choros Mapper tool favored the latter; by first performing a spectral classification and secondly calculate the context. This result is very interesting when put in relation to the overarching theories dealing with the functions of power thru visibility and interpretation.

Lastly, this thesis finds four major themes that are particular in the processual change of the Palestinian landscape: 1. The Israeli/Palestinian time-space with its multiple speeds and ages not co-existing but rather fighting for hegemony; the past over the present, the modern over the backwards, the fast Israeli highways on the expense of the slow Palestinian parcels; and the consequential understanding of power and territory. 2. The blurring of the conflict, causing power to be concealed behind an equivocal legal system and an equivocal occupation, resulting in a dysfunctional market system with no reliability, foresting of seized land, and an unified struggle. 3. The dynamic frontier region, creating a landscape where humans and land are fused, where the keeping of the national border is down to the individual workforce, farming the plots behind or in front of the wall. 4. The orientalist gaze; the cartography, the water regime, the ideas of development of the British Mandate and the hilltop surveillance of the occupying power of the Israeli settlements; are all forces that has turned ideas into a landscape of power.

## Suggested further studies

This thesis has focused on the two dominant groups; Jewish Israelis and Arabic Palestinians. I have only in passing mentioned the Bedouin. However, the Bedouin situation is highly related to the topic of this thesis; their access to land and dispossession is a hot topic. A number of Bedouin villages is currently facing demolition; one of the several located in the Negev desert is to be replaced by an expansion of the Yahir forest, planted and managed by the Jewish National Fund. The tribes living in the village were transferred to its current location by the Israeli government in 1956, after forced displacement following the war. The twin village, Umm al-Hiran is also to be demolished, but in this case to make way for a Jewish village planned to be named Hiran. Both villages are located on land classified as state land (Iraqi, 2015). The situation is complex and falls out of the scope of this thesis, however, the large structures are symptomatic: the name change and the tree planting are efficient tools in the normalization of the dominance.

## List of Reference

- Ahlqvist, O., Wästfelt, A. & Nielsen, M. (2011) Formalized interpretation of compound land use objects – Mapping historical summer farms from a single satellite image. *Journal of Land Use Science*, (January), pp.1–19.
- Alatout, S. (2006). Towards a bio-territorial conception of power: Territory, population, and environmental narratives in Palestine and Israel. *Political Geography*, 25(6):601-621.
- ARJI, The Applied Research Institute - Jerusalem (2012) *Al Jiflik Village Profile*. Jerusalem.
- Ashmore, W and Knapp, B. A. (1999) Archaeological Landscapes: Constructed, Conceptualized, Ideational. In *Archaeologies of Landscapes. Contemporary perspectives*. (eds.) W. Ashmore & A. B. Knapp. Malden, Mass.: Blackwell Publishers
- Auman, M. (1976) *Land Ownership in Palestine 1880-1948*, Third Revised Edition, Jerusalem: Israel Academic Committee on the Middle East.
- Aveneri, A. (1984). *The claim of dispossession*. New Brunswick [N.J.] USA: Transaction Books.
- BBC (2014-01-11) In quotes: Ariel Sharon. <http://www.bbc.com/news/world-middle-east-11576714> [2016-04-05]
- B'tselem (2013) What is area C? [http://www.btselem.org/topic/area\\_c](http://www.btselem.org/topic/area_c) [visited 2016-04-01]
- B'tselem Interactive Map <http://www.btselem.org/map> [visited 2016-04-15]
- B'tselem (2004) Forbidden roads: the discriminatory West Bank road regime. B'tselem, Israel
- Bowman, G. (1999) The Exiled Imagination: the construction of the landscape of Palestine from its outside. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. pp.54-77

- Broich, J. (2013). British Water Policy in Mandate Palestine: Environmental Orientalism and Social Transformation. *Environment and History*, 19(3):255-281
- Couclelis, H. (2010) Ontologies of geographic information. *International Journal of Geographical Information Science*. 24(12):1785-1809
- Convergne, E. and Snyder, M. (2015) Geospatial Technology as a Conflict Prevention and Management Tool in UN Peacekeeping. *New Issues in Peacekeeping*. International Peace Institute
- Crampton, J and Krygier, J.W. (2006) Introduction to Critical Cartography. *ACME: An International E-Journal for Critical Geographies*, 4(1):11-33
- Cosgrove, D. (1994) Contested Global Visions: One-World, Whole-Earth and the Apollo Space Photographs. *Annals of the Association of American Geographers*. 84(2):270-294
- Cosgrove, D. (2003) Landscape: Ecology and Semiosis. In. Palang, H. & Fry, G. (ed.). *Landscape interfaces: cultural heritage in changing landscapes*. Dordrecht: Kluwer Academic. pp.15-20
- Efrat, E. (1988). *Geography and politics in Israel since 1967*. London: F. Cass.
- Cope, M; Elwood, S, eds. (2009) Introduction: Qualitative GIS: Forging mixed methods through representation, analytical innovations, and conceptual engagements. In *Qualitative GIS: A mixed method approach*. SAGE Publications Ltd.
- Eriksson, Y. (2007) Aspects of Cartography as a Scientific and Artistic Practice. In *Images in Arts and Sciences. Selected Papers from a Conference Held by the Royal Society of Arts and Sciences in Göteborg, 13-14 October, 2004*. (eds) Johannesson, L., Eliasson, U., Hallberg, P. & Karlsson, B. pp.127-148
- Falah, G. (1999) The Transformation and De-Signification of Palestine's Cultural Landscape. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. pp.97-107.
- Falah, G.W. (2003) Dynamics and patterns of the shrinking of Arab lands in Palestine. *Political Geography*, 22(2), pp.179–209.
- Foucault, M. (1978). *Discipline and punish*. New York: Vintage Books.
- Foucault, M. (1980). *Power/knowledge: selected interviews and other writings 1972-1977*. Brighton: Harvester Publication.
- Gasteyer, P. S. (1999) Manathir Tabi'iyya: Perceptions of Landscape and Landscape Change in the Southeastern West Bank. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. pp.37- 50
- Handel, A. (2014) Gated/gating communities: the settlements complex in the West Bank. *Transactions of the Institute of British Geographers*, New Series (39):504–517
- Handel, A., Rand, G. & Allegra, M. (2015) Wine-washing: colonization, normalization, and the geopolitics of *terroir* in the West Bank's settlements. *Environment and Planning A*, 47(6):1351–1367.
- Harley, J.B. (1989) Deconstructing the Map. *Cartographica*. 26(2):1-20
- Harley, J.B. (1988) Maps, knowledge and power. In Cosgrove, D. and Daniels, S., editors, *The iconography of landscape*. Cambridge: University of Cambridge Press, pp. 277-312.
- Harris, L. (2014) Imaginative Geographies of Green: Difference, Postcoloniality, and Affect in



- Environmental Narratives in Contemporary Turkey. *Annals of the Association of American Geographers*, 104(4):801-815.
- Hazigüzeller P. (2012) GIS, critique, representation and beyond. *Journal of Social Archeology*. SAGE Publications. 12(2): 245-263
- Heacock, R. (1999) Al-Majs Was-Sumood: Landscapes of Glory and Resignation. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. pp.125-154
- Howarth, J. T. (2008) Landscape and Purpose: modeling the functional and spatial organization of the land. Doctoral Dissertation. University of California, Santa Barbara.
- Hsu, C-W., Chang, C-C. & Lin, C-L. (2010) A practical Guide to Support Vector Classification. National Taiwan University: Taipei.
- ICRC (1949) The Geneva Conventions of August 12, 1949, International Committee of the Red Cross, Geneva, pp.153-221
- Iraqi, A (2015) Bedouin village of Atir to be replaced with forest of 'Yatir'. *972 Magazine*. 2015-06-16 <http://972mag.com/bedouin-village-of-atir-to-be-replaced-with-forest-of-yatir/107905/> [visited 2016-04-12]
- Jabareen, Y. (2015) Territories of negotiations: co-production of "creative destruction" in Israel. *Geoforum*. (66):11-25
- Jewish National Fund (JNF) <http://www.jnf.org/about-jnf/history/> [visited 2016-04-12]
- Jewish Virtual Library [http://www.jewishvirtuallibrary.org/jsource/Society\\_&\\_Culture/land.html](http://www.jewishvirtuallibrary.org/jsource/Society_&_Culture/land.html) [2016-04-12]
- Kamel, L (2014) Whose land? Land Tenure in Late Nineteenth- and Early Twentieth- Century Palestine. *British Journal of Middle Eastern Studies*. 41(2):230-242
- Kvale, S. (1997). Den kvalitative forskningsinterview. Lund: Studentlitteratur.
- Long, J. (2008). Rooting diaspora, reviving nation: Zionist landscapes of Palestine-Israel. *Transactions of the Institute of British Geographers*, 34(1):61-77.
- Martin, D. G. & Scherr, A. (2009) Lawyers as constituents of landscape. In *Justice Power and the Political Landscape*. Eds. Olwig, K. and Mitchell, D. Routledge. pp.91-105
- Ministry of Defence (2007) Israel's Security Fence. 2007-01-31. <http://www.securityfence.mod.gov.il/Pages/ENG/operational.htm> [visited 2016-04-01]
- Ma'an Development Organization (2010) To Exist is to Resist - Eye on the Jordan Valley. Ma'an Dev. pp. 1-36
- Maitland, C. F. (2013). "Maps, Politics and Data Sharing: A Palestinian Puzzle," Proceedings of the ICTD2013 Conference, Cape Town, South Africa, Dec. 7-10, 2013
- Matar, N. I. (1999) Renaissance cartography and the question of Palestine. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. Pp.139-152
- McDowell, L. (2010). Interviewing: Fear and liking in the field. In D. DeLyser, S. Herbert, S. Aitken, M.

- Crang, & L. McDowell (Eds.), *The SAGE handbook of qualitative geography*. (pp. 156-172). London: SAGE Publications Ltd.
- Nadan, A. (2003) Colonial Misunderstanding of an Efficient Peasant Institution: Land Settlement and Mushā Tenure in Mandate Palestine, 1921-47. *Journal of the Economic and Social History of the Orient*, 46(3), pp.320-354.
- Nazer, S. W. (2008). *Hortus Conclusus: change, perception and meaning in Artas Valley/Palestine*,. Doctoral Thesis. Norwegian University of Life Science, UMB.
- Nielsen, M.M. (2014) “Inferring Land Use from Remote Sensing Imagery: A context-based approach”, Department of Human Geography, Stockholm University, Doctoral Thesis
- Nielsen, M.M. & Ahlqvist, O. (2014) Classification of different urban categories corresponding to the strategic spatial level of urban planning and management using a SPOT4 scene. *Journal of Spatial Science*, 60 (1):99-117
- Nielsen, M.M.; Heurich, M.; Malmberg, B.; Brun, A. (2014) Automatic Mapping of Standing Dead Trees after an Insect Outbreak Using the Window Independent Context Segmentation Method. *Journal of Forestry*.112(6):564-571
- OCHA (2007) The Barrier Gate and Permit Regime Four Years on: Humanitarian Impact in the Northern West Bank. *United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA oPt): Special Focus*. November 2007.
- OCHA (2011) Barrier Update. *United Nations Office for the Coordination of Humanitarian Affairs, Occupied Territories (UN OCHA oPt) Special Focus*. July 2011.
- OCHA (2014) 10 Years since the international court of justice (ICJ) Advisory Opinion. *United Nations Office for the Coordination of Humanitarian Affairs ( UN OCHA oPt): Special Focus*. July 2014.
- Olwig, K. (1996). Recovering the Substantive Nature of Landscape. *Annals of the Association of American Geographers*, 86(4):.630-653.
- Olwig, K. (2002) Landscape Nature and the Body Politic - From Britain's Renaissance to America's New World. University of Wisconsin Press.
- Olwig, K. (2005) Representation and alienation in the political land-scape. *Cultural geographies*. (12):19-40
- Palang, H. & Fry, G. (2003) Landscape interfaces: Introduction. In In Palang, H. & Fry, G. (ed.) *Landscape interfaces: cultural heritage in changing landscapes*. Dordrecht: Kluwer Academic. pp.1-13
- Polk, W.R.; Stamler, D.H.; Asfour, E. (1957) Backdrop to Tragedy: The Struggle for Palestine. Boston: Beacon Press
- Said, E. (1999) Palestine: Memory, Invention and Space. In *The Landscape of Palestine: Equivocal Poetry*. Eds. Abu-Lughod, I; Heacock, R; Nashef, K. Birzeit University Publications. pp.3-23
- Said, E. (2000). *Orientalism*. [Ny utg.] Stockholm: Ordfront
- Sasson, T. (2005) Summary of the Opinion Concerning Unauthorized Outposts. Official Israeli Government Report. Ministry of Justice. Published 2005-05-08
- Settler Watch (2016) Bosättningar. <http://www.settlerwatch.com/publikationer/bosattningar/> [visited 2016-02-20]

- Schnell, I., & Leuenberger, C. (2014). Mapping genres and geopolitics: the case of Israel. *Transactions Of The Institute Of British Geographers*, 39(4):518-531
- Schuurman, N (2004) GIS: A Short Introduction. Blackwell Publishers
- Shalev, N., Cohen-Lifshitz, A. (2008) The Prohibited Zone - Israeli planning policy in the Palestinian villages in Area C. *Bimkom - Planners for Planning Rights*. Oxfam Novib.
- Shalev, N. (2012) Under the Guise of Legality: Israel's Declarations of State Land in the West Bank. *B'tselem*. February 2012.
- Shlaim, A (2013) It's now clear: the Oslo peace accords were wrecked by Netanyahu's bad faith. *The Guardian*. 2013-09-12
- <http://www.theguardian.com/commentisfree/2013/sep/12/oslo-israel-renege-colonial-palestine> [visited 2016-04-03]
- Sivan, E. (2003) 'The lights of Netzarim', Ha'aretz; 7 November 2003.
- Spivak, G. (1988) Can the Subaltern Speak? In *Marxism and the Interpretation of Culture* (eds.) Nelson, C & Grossberg, L. Macmillan Education: Basingstoke. pp.271-313
- Svennevig, J. (2001). Abduction as a methodological approach to the study of spoken interaction. *Norskraft*, (103):1-22
- Swensen, G (2003) Pressure on the Fringe of the Cities. In Palang, H. & Fry, G. (ed.). *Landscape interfaces: cultural heritage in changing landscapes*. Dordrecht: Kluwer Academic. pp. 273-292
- Tilsen, J.J. (2003) Ottoman Land Registration Law as a Contributing Factor in the Israeli-Arab Conflict
- <http://www.beki.org/dvartorah/landlaw/> [visited 2016-02-26]
- UNRWA <http://www.unrwa.org/where-we-work/west-bank> [visited 2016-05-03]
- Wallach, Y. (2011) Trapped in mirror-images: The rhetoric of maps in Israel/Palestine. *Political Geography*, 30(7):358–369.
- Weizman, E. (2007) Hollow Land: Israel's Architecture of Occupation. London: Verso.
- Widgren, M. (2002). Three perspectives on landscapes. Paper presented at *20th Session of The Permanent European Conference for the Study of the Rural Landscape*, Tartu-Otepää.
- Widgren, M. (2004) Can Landscapes be Read? In *European rural landscapes: persistence and change in a globalising environment*, (ed). Palang, H. Boston: Kluwer Academic Publishers.
- Widgren, M. (2006) Reading property in the landscape. *Norsk Geografisk Tidsskrift/Norwegian Journal of Geography* (60):57-64. Oslo.
- Wood, D. (2010). Rethinking the power of maps. New York: Guilford Press.
- Wood, D., & Fels, J. (2008). The natures of maps: Cartographic constructions of the natural world. Chicago: University of Chicago Press
- Wästfelt, A. (2007a) Giving Satellite Images Meaning in Social Science. In *Images in Arts and Sciences. Selected Papers from a Conference Held by the Royal Society of Arts and Sciences in Göteborg*, 13-14 October, 2004. (eds.) Johannesson, L., Eliasson, U., Hallberg, P., & Karlsson, B. pp. 75-88

- Wästfelt, A. (2007b) Geometriska jordebokskartor: En representation av ojämlika relationer. In Jansson, U. (ed), *Kartlagt land - Kartan som källa till de areella näringarnas geografi och historia*. Skogs- och lantbrukshistoriska meddelanden 40. Kungl. Skogs- och lantbruksakademien, Stockholm.
- Wästfelt, A. (2009) Land-use qualities Identified in Remote-sensed Images. *International Journal of Remote Sensing*, 30(9):2411-2427.
- Wästfelt, A.; Tegenu, A. & Malmberg, B.. (2012) Qualitative satellite image analysis: Mapping spatial distribution of farming types in Ethiopia. *Applied Geography*, 32(2),:465–476.
- Wästfelt, A. (2015) Reclaiming Position: Using Local Context to Visualise Interpretations of Satellite Images in Humanities and Social Science. *Konsthistorisk tidskrift/Journal of Art History*, 84(2):108–122.

## Appendix A

### Organisations involved

PARC Agricultural Development Association- preparatory interviews and concluding interviews 2016-03-07 and 2016-03-21, group interview 2016-03-13, field visit 2016-03-20.

Ma'an Development Center - preparatory interviews 2016-03-10, field visit 2016-03-17

Al-Nahda Association for Developing Rural Community - interview and field visit 2016-03-21 (joint with PARC visit)

Organized observation - Ramallah region 2016-03-14, Jericho region (Jordan Valley) 2016-03-19

Informal conversation - 2016-02-27 to 2016-03-24, including conversations before or after an interview and everyday conversation with the interpreters and people associated with Birzeit university (i.e. former master student, a professor).