

Shadow Spaces: Territory, Sovereignty, and the Question of Palestinian Cultivation

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## **Dedication**

For my parents

## Abstract

Practices of cultivation and control over land are deeply entangled matters in Israel-Palestine. By the turn of the twentieth century scientists had begun to systematically examine the cultivation practices of Arab farmers. Around the same time, the area was the scene of major land struggles as both Palestinian Arabs and Zionist groups sought to establish control over land. In the study of modern Historic Palestine, the cultivation practices of Palestinians and the contest for control over land have each constituted abundant but generally separate scholarly arenas. However, the relationship between the two furnishes a productive sphere of empirical and conceptual inquiry into the broad set of relations between forms of political community and claims to land. The entangled relation is illustrated by the legal distinction between cultivated and uncultivated land, which is an important basis for the reclassification and appropriation of land by Israel. Thus, I argue that the question of cultivation, both of land and of people, emerges as a central problematic in the imagination of Israel-Palestine as a geographical realm.

This dissertation explores the question of cultivation through two central modes of inquiry. Cultivation in the first sense is understood to be an *abstract concept* that allows the state to enact technologies of rule. Cultivation in the second sense is a *concrete practice* of farmers who leverage the capacities of the land to affirm claims to territory. Drawing from literary and historical concepts as well as fieldwork, I show that modern colonialism requires the classification and adjudication of cultivation practices to justify land appropriation. I further illustrate that this reliance on cultivation paradoxically produces a site of contestation that at once engages and unsettles legal categories.

This study requires rethinking the history of cultivation not as linear development but rather through a series of contingent moments or shadow spaces. These moments produce a narrative that summons traces of past events and folds them into the present. More generally, such an understanding of history and geography enables me to explore not only what was foreclosed at a given conjuncture, but also better understand the present condition.



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## **Introduction // Toward a Vernacular Theory of Shadow Spaces**

Being young, I could not ascertain what was wrong or right, whether as a son I was responsible for fate itself. To me, the Spirits were ever-present regardless of ceremony. They and no one else decided. Could they not forgive? Or was that a Western concept? <sup>1</sup>

Ray A. Young Bear, "Black Eagle Child," 1992

Come let us divide the light by the force of the shadow  
Take what you want of the night  
and leave for us two stars to bury our dead in the celestial sphere  
Take what you want of the sea  
and leave for us two waves to catch fish  
Take the gold of the earth and the sun  
and leave for us the land of our names<sup>2</sup>

Maḥmūd Darwīsh, "Khuṭbat al-Hindi al-Aḥmar" (Speech of the Red Indian), 1992  
On the 500<sup>th</sup> anniversary of the Columbian encounter

### **Introduction**

Around 1923 the residents of Tel al-'Adas, an Arab village on the sprawling Marj Ibn 'Amer plain near Nazareth, were expelled by the new owners of the village land, the Palestine Land Development Company. One thousand hectares of farmland had been purchased by representatives of the Zionist movement from a Lebanese businessman who sold the area to subsidize investments elsewhere. The sale would appear to be a fairly pedestrian event in the history of land speculation in Late Ottoman Palestine were the

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<sup>1</sup> (Young Bear, 1992, p. 61)

<sup>2</sup> Translation by the author from the Arabic (Darwīsh, 1992)

buyers not planning to expel the local peasants and settle the area with non-Ottoman subjects. Still more intriguing and salient however, is what happened between the sale in 1916 and the expulsion in 1923. After the sale, local Arab peasants whose land had been sold out from under them, continued to cultivate it. This brought an interim period of eight years when trained agricultural scientists and farm managers from the Zionist movement undertook a study of what they inaugurated as the “The Fallah’s Farm” or The Peasant’s Farm. They meticulously recorded the yields of key crops like wheat, barley, and lentils produced by the farmers of Tel al-‘Adas and surrounding villages. For eight seasons, scientists collected data on yields, tillage practices, and cropping patterns. Then, when plans for the new Zionist settlement were finalized, the peasants were expelled from the village, and the settlement of Tel Adashim was established in its stead. As was the case in several area villages, sporadic violent reprisals from displaced peasants and futile efforts of sympathetic Ottoman officials failed to return control of the land to the Arab peasants.<sup>3</sup> Laws of private property were invoked, and Ottoman authorities enforced the sale with force of arms. Scientific study of Arab peasants’ cultivation techniques was also conducted in Jinjār, Jebāta, and Tel al-Fir, among other villages, “until transferred to the new colonists.”<sup>4</sup> The purpose of this series of agricultural studies was to provide the “basis for analytical comparison” between different kinds of farms in the grain belt of Palestine.<sup>5</sup> The local peasants whose existence had been tied to the land for generations

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<sup>3</sup> (Khalidi, 2010)

<sup>4</sup> (I Elazari-Volcani, 1930, p. v)

<sup>5</sup> (I Elazari-Volcani, 1930, p. III)

were described in the studies as “tenant farmers.”<sup>6</sup> Part of the study was published in Hebrew in 1928, and the expanded English version emerged in 1930. This treatise, *The Fallah’s Farm*, was but one contribution in a series of subsequent academic studies over at least six decades by the Zionist movement and later the State of Israel to inventory and evaluate Palestinian Arab cultivation practices.<sup>7</sup>

Territorial sovereignty lies at the heart of the conflict between Palestinian Arabs and Jews in Historic Palestine and, as such, its discussion has constituted a major source of the historiography of the area.<sup>8</sup> While both the dispossession of peasants such as those in Tel al-‘Adas, and the scientific pursuits of the Zionist movement have been documented separately by scholars, the empirical relationship between the two has not been explored.<sup>9</sup> The relationship outlined above also furnishes a productive sphere of conceptual inquiry into the broad set of relations between settler-colonialism and forms of political community arrayed in opposition to it.

I approach cultivation not as a self-evident concept, but rather as a hermeneutic that opens questions about a wider set of relations between agriculture as science and practice, the workings of law, the land question, and the politics of belonging. Each of these themes is woven into the dissertation chapters that follow. Cultivation, both of land and of people, holds a central place in the imagination of Palestine as a geographical and political realm. My dissertation excavates evolving relations between objects, ideas, people, and the land through the prism of cultivation.

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<sup>6</sup> (I Elazari-Volcani, 1930, p. V)

<sup>7</sup> (Arnon & Raviv, 1980; I Elazari-Volcani, 1930; Isaac Elazari-Volcani, 1938; J. Elazari-Volcani, 1935)

<sup>8</sup> (Khalidi, 2010; Kimmerling, 1983; Shafir, 1989; K. W. Stein, 1987)

<sup>9</sup> (Kamen, 1991; Karlinsky, 2005; Khalidi, 2010; Penslar, 1991)

Technologies of scientific measurement have changed over time, but land use and cultivation practices remain crucial objects of analysis in Israel-Palestine today. While seemingly detached from wider processes of settlement, the scientific evaluations of Arab cultivation form the basis for a system of reclassification of land. Today, decades after *The Fella's Farm*, the nature of cultivation practices (or lack thereof) of Palestinians serve as warrant for appropriation of land through juridical mechanisms, such as the declaration of large tracts as “state land.” In fact, Israeli control over land in the West Bank in recent decades has depended heavily on the distinction between cultivated and uncultivated land and other legal justifications based on land use.<sup>10</sup> On the one hand the practices of Arab farmers have been the subject of intensive scientific scrutiny. On the other hand, land cultivated by Arab farmers has been the focus of interest for bringing areas under Israeli control. The processes of gaining control over land invoke bodies of scientific analysis, legal precedent and other past events, to facilitate the settlement enterprise. This context gives rise to the central question of this dissertation: What is the nature of the relationship between cultivation practices and the control over land in Israel-Palestine? I refer to this rich field of investigation as the *Question of Cultivation*.

The dissertation considers this question through two central modes of inquiry, comprising Part 1 and Part 2 of the dissertation respectively. The first deals with the *politics of representation* that settler-colonialism depends upon to consolidate control over territory. More specifically, control over land requires legal mechanisms for appropriation of territory. This juridical realm in turn relies on an index used to evaluate

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<sup>10</sup> (Btselem, 2010)

cultivation practices and land use. This index was produced through regimes of scientific experimentation and the creation of a hierarchy of land use practices. In short, a *politics of representation* based on science and law produced Palestinian cultivation as an abstract concept. The first two chapters, or Part 1, deal with the production of that abstraction.

The next two chapters, or Part 2, deal with the *politics of persistence* arrayed in opposition to settler colonialism's land enterprise. More specifically, I show the dependence of law on an index of cultivation also produces cultivation as a site of contestation. In other words, because legal orders based on land use are required to appropriate land, Palestinians are able to contest them on that basis. In this way, cultivation emerges as both the basis for appropriation and its limit. This limit, what I call the politics of persistence, gestures to the prospect of Palestinian political community or being, not as pre-determined by essential forms of collectivity, but rather as the potential to not be or be otherwise. In concrete terms, the (often contestatory) cultivation practices of Palestinian farmers should be understood, I argue, as practices of persistence that instantiate themselves in ongoing demonstrations of attachment to the land. While they these may take a state form, they do not necessarily see it as their ultimate objective.

To summarize, my dissertation pursues two modes of inquiry into the question of cultivation: *cultivation as abstract concept* and *cultivation as concrete practice*. While every abstract concept is itself the outcome of concrete practices, I mean to differentiate here between outcomes that take a stratified form (an objectification such as a land use hierarchy) in the service of territorial control and those mobile practices (a politics of persistence) that strive to unsettle state stratifications.

Why does the question of cultivation matter? Very simply, because the classification and evaluation of land use has historically played a central enabling role in the appropriation of land in Historic Palestine. Modern settler-colonialism is distinct from other forms of rule (for example extractive colonial projects) in its focus on the continuous consolidation of control over land. Thus, as its distinguishing feature, control over land through the question of cultivation is both its ambition and its limit. Moreover, science and law circulate and travel across different settler-colonial contexts shaping the development of mechanisms of land appropriation.

In order to explore the two modes (representation and persistence) of the question of cultivation, I argue that scholarly analysis of land issues in Historic Palestine must be reconsidered. The longstanding land struggles (land question) are reshaped by the question of cultivation because a chronological telling produces a narrative of linear continuity. In contrast, I submit that the question of cultivation is best considered through a series of conjunctural moments in which the past is constantly invoked and put to work in a present situation. Rather than accepting the standard model of causality – a cause having an effect – this dissertation shows how a given effect may call its cause into being by summoning it from the past. To return then to Tel al-ʿAdas, this understanding of method (and by extension, time) means that the expulsion of the village’s residents likely included reaching back into the cultivation index created in scientific studies, to provide warrant for appropriation of land.

To explore this matter, my dissertation excavates the historical connections between vernacular histories and practices of cultivation. These connections have been



obscured by a series of separations enacted in juridical and scientific realms, such as the division between ‘cultivated land’ and ‘uncultivated land’. Exploring the connections is another way of saying that I seek to recover those practices, ideas, and processes that inhabit the *shadow spaces* between and in excess of established historical narratives. As I show in detail below, I derive the concept of shadow spaces from the Arabic word *zill*, or shadow, as it might be read in the work of the poet Mahmud Darwish. In my reading, *zill*-shadow is understood in two senses. First, shadow spaces are traces that unsettle dominant, linear narratives of history. One might think of the traces left by places such as Tel al-‘Adas, both material and figurative, that haunt our understanding of its history. Second, shadow spaces shelter a potentiality that awaits possible activation. One might consider how the embodied practices of cultivation of Palestinian farmers are put to work with the heterogeneous capacities of land to animate ‘lost’ histories and reimagine both past and future. Building on Michel Foucault’s method of genealogy, the shadow as trace becomes the “disqualified knowledge” that continually mark the presence of the past in virtual form.<sup>11</sup> In line with this genealogical method, I understand a given situation not as part of a sequence of chronological events (a narrative of historical progress where the present supersedes the past), but as a conjuncture or a moment in which elements of the past are constantly refigured for the present. I argue that the horizons that emerge out of these moments are not necessarily legible through the grid of established political orders or historical narratives.<sup>12</sup> Thus the question of cultivation emerges through the double movement of both modes as (a) the scientific index and legal warrant for the

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<sup>11</sup> (M. Foucault, Burchell, & Gordon, 1991)

<sup>12</sup> (P. J. C. Scott, 1999, 2009)

appropriation of land and, consequently, as (b) a site of contestation through embodied practices of cultivation.

As previously noted, the dissertation is divided into two parts. Part 1 examines how cultivation becomes an index that allows the state to enact technologies of rule, such as law. Appropriation requires law, and law in turn seizes the index of cultivation as its justification for the state to territorialize itself. However, this also means that cultivation practices emerge as a site of politics in the attempt to requisition land from Palestinians. In this sense, the land question under settler colonialism is marked by the agronomic justifications the state must invoke to justify its territorialization. Part 2 explores how a variety of Palestinian writers have addressed the question of political being through the practice of cultivation. I argue that these texts illustrate how farmers constantly affirm their attachment to the land through cultivation.

A central contribution of the dissertation is to focus on the concrete historical practices of measurement, representation, and contestation, which I argue re-imagines political community without reliance on a political ontology that finds culmination in the state form. This ontology does not disavow the state form as such, but rather refuses a teleological understanding of the state form. A political ontology that finds expression in a politics of persistence challenges dominant narratives of Palestinian political contestation that read it through the grid of a 'national' proto-national subject whose desire is for the state-form. Instead, my dissertation explores those practices that seem to evade classification within the frame of state politics as part of opening space for alternative forms of political community that do not inevitably take recourse to the state,

even when that state claims an anti-colonial identity. In this sense, I both embrace an explicitly *postcolonial* critique of representation and also try to extend the ambit of such critique by injecting into it the indeterminacy of political being.

### **Background on problem**

The dissertation hinges on two central problems originating in scholarship on modern colonialism and political life. First, the emerging field of comparative settler-colonial studies has identified the land question and the circulation of materials and knowledge between colonies, but not in relation to juridical practice. Second, notions of Palestinian political being are generally restricted to established state-based political subjectivities, but this dissertation shifts the focus to practices of cultivation and attachment to land that produce novel political horizons. The dissertation confronts the foregoing oversights in Part 1 and Part 2 of the dissertation respectively. To illustrate the importance of the two problems identified above, I turn next to current debates on those topics.

### *Dispossession and Law*

What is gained by an emphasis in this dissertation on comparative settler-colonialism? A focus on settler-colonialism necessarily draws Israel-Palestine into conversation with other colonial encounters.<sup>13</sup> The relationship of past conquest with the present is an important theme explored across colonial contexts by the poet Mahmud Darwish. He

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<sup>13</sup> (Lockman, 2012, p. 35)

captured this notion aptly when he wrote in the voice of the Native American addressing colonizers on the 500<sup>th</sup> anniversary of the Columbian encounter, “It will be a long time for our present to become the past like us.”<sup>14</sup> In doing so, he affirmed the entanglement of the ruins of the past in the problem of the present.

Modern settler-colonial projects, whether in the United States, Canada, or Australia, must relentlessly territorialize<sup>15</sup> themselves through exclusion.<sup>16</sup> Though dwarfed by the devastation wrought upon native and enslaved peoples in the Americas, Palestine’s Manichean spheres of human habitation offer a prism to consider the conceptual underpinnings law, dispossession, and the question of cultivation.

What binds Palestine to other settler-colonial spaces is the focus on control over land. The land question was discussed extensively in the 1970s in relation to settler-colonialism in Palestine,<sup>17</sup> but the comparative settler-colonial framework has seen a resurgence of interest in recent years. The land question has emerged at the center of these recent debates. For example, David Lloyd contends that the land question sets settler-colonialism apart. He writes: “For what distinguishes a settler colony from an administrative or extractive one is in the first place the settlers’ focus on the permanent appropriation of land rather than the political and economic subordination of the indigenous population, the monopolization of its resources or the control of its markets.”<sup>18</sup> Thus for Lloyd the settlers’ interest in an enduring control of the land

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<sup>14</sup> Translation by the author from the Arabic (Darwish, 1992)

<sup>15</sup> Territorialization generally refers to the state practices of reorganizing territory for the purposes of control, resource extraction, and management of the population (Sivaramakrishnan, 1999, pp. 153–156).

<sup>16</sup> (Abdulhadi et al., 2012; Bruce Braun, 2002; Kauanui, 2008; Warrior, n.d.; Wolfe, 2007, 2012)

<sup>17</sup> (Abu-Lughod & Abū-Labān, 1974; Kayyālī, 1979; Kimmerling, 1983; Rodinson, 1973).

<sup>18</sup> (D. Lloyd, 2012, p. 66)

produces a distinct array of logics and policies designed to actively and continually territorialize the state.

Similarly, Mamdani has recently argued that the land question remains crucial to understanding U.S. politics. Comparing the situations of African-Americans and Native Americans in the United States he remarks: “For the settler, African-Americans signified labor, in contrast American Indians were the source of land.”<sup>19</sup> This for Mamdani marks the role of what he calls the “native as political identity,” a concept that forces a rethinking of social justice in the United States because the “native question” remains unaddressed even as the “race question” is explored.<sup>20</sup> He thereby shows how the “thrust of American struggles has been to deracialize but not to decolonize.”<sup>21</sup>

If the centrality of the land question to settler-colonial studies has been established, then how does this dissertation extend the analysis? In their introduction to a special journal issue dedicated to settler-colonialism in Israel-Palestine, the co-editors Salamanca et al. call for academic attention into the “the settler-colonial structure underpinning” Israeli government policies.<sup>22</sup> This attention to structure crucially reorients the more common approach of describing diverse tactics of subjugation of the Palestinian population toward studying settler-colonialism as a highly adaptive political formation focused on control over land. In this vein, Lockman has recently weighed in on the *plasticity* of the Israeli settlement enterprise. He critiques the assumption made by Shafir in his classic work on the land question in Palestine that the essential character of

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<sup>19</sup> (Mamdani, 2012)

<sup>20</sup> (Mamdani, 2012)

<sup>21</sup> (Mamdani, 2012)

<sup>22</sup> (Jabary Salamanca, Qato, Rabie, & Samour, 2012, p. 2)

Zionism was forged by 1914 in labor Zionist policies of economic separatism and that what unfolded afterward could be explained through that early Zionist thought.<sup>23</sup> Thus, for Shafir the 1967 annexation of the West Bank by Israel constituted an aberration that diverged from its original character. Taking issue with this assertion, Lockman argues that the successes of the Zionist strategy cannot be explained solely from an assumed essential character, but rather through a complex of other factors including “state action, various forms of coercion, and violent conflict”.<sup>24</sup> It might be said, then, that the adaptive and solvent features of settler-colonialism attach themselves to various juridical, economic, and coercive processes to effect dispossession of land.<sup>25</sup> The difficult scholarly task then becomes exploring the effaced historical connections that illustrate the structural qualities of settler-colonialism in varied contexts.

Structural relationships around the question of land and cultivation have largely remained unexamined, especially between the circulation of knowledge and materials among settler colonies and the legal practices required to bring greater areas of land under control. Postcolonial studies and the emerging field of settler-colonial studies in particular have addressed the centrality of the land question and the circulation of materials and practices among colonial powers. However, scholars have been slow to explore the empirical relationship of Israeli agricultural sciences and control over land in Israel-Palestine. Equally important, at the conceptual level, this nascent field of inquiry has elaborated the circulation of political practices but not in conversation with the circulation of legal practices.

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<sup>23</sup> (Lockman, 2012; Shafir, 1989)

<sup>24</sup> (Lockman, 2012, p. 29)

<sup>25</sup> (Gidwani, 2008a)

My dissertation argues that the circulation of materials and knowledges around agriculture must be considered in relation to the legal practices that enabled dispossession of land. It is precisely this vantage point from the settler colony that extends, for example, important recent work of Esmeir on the production of the “human” in the law of colonial Egypt.<sup>26</sup> In contrast to extractive colonial spaces such as Egypt, the land question in Palestine put priority on the collective dispossession of entire groups, rather than the enrollment of individuals as modern subjects.

### *Political Being-in-Common*

The question of being is one of the most widely debated themes within Western metaphysics. I will not attempt any kind of comprehensive summary here, but one of the most important things one must say is that being is never static: that is to say, it is always emergent and in the process of becoming. Here Fanon’s formulation of the opposition of colonized people is instructive.<sup>27</sup> Most forcefully, Fanon warned against a fixed, modern understanding of subaltern consciousness rooted in the land. He described the tactics of departing colonial authorities, noting that the colonized, the *fallahin* (peasants), are not persuaded by colonial overtures because of their material relationship to the land.

According to Fanon:

For a colonized people, the most essential value, because it is the most meaningful, is first and foremost the land: the land which must provide bread and,

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<sup>26</sup> (Samera Esmeir, 2011, 2012)

<sup>27</sup> One does not have to endorse Fanon’s contentious positions on anti-colonial violence, which alone constitute a scholarly debate, to derive powerful insights into his reading of the political ontology of being. (Gidwani, 2008b)

naturally, dignity. *But this dignity has nothing to do with “human” dignity.* The colonized subject has never heard of such an ideal.<sup>28</sup>

This assertion presents many possibilities for reflection. One reading might be that Fanon is essentializing peasant life<sup>29</sup>; I would instead like to emphasize how Fanon distinguishes “bread” and “dignity” on the one hand from “human” dignity on the other. For Fanon, “human dignity” is an empty concept of liberal humanism unless backed by the material conditions that can enable its realization. Thus, Fanon affirms a substantive practice of dignity and freedom that is not mediated by state logics or individual personhood. It is instead anchored to a collective freedom that provides both sustenance and self-respect. While Fanon underscores the importance of “bread” and “dignity” he does not try to circumscribe the social form that may embed them. For Fanon, land is a significant aspect of belonging to political and social community, whereas a “human” relationship to land forged in law effectively strips the governed subject of their politicalness. Qualification as rights-bearing individuals in the formal realm of law wrenches people from political community into an abstract sphere of “human dignity” or “rights”. Correspondingly, Fanon’s acclamation of freedom and dignity anchored in land should not be construed as affirmation of fixed territorial identities or, for that matter, a nativist politics that asserts exclusive claim to land.

Fanon concluded that colonial overtures, what he calls “culture, values, and technology,”<sup>30</sup> must be rejected and replaced. Fanon’s critique is insightful for two

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<sup>28</sup> (Fanon, 2004, p. 9), emphasis added

<sup>29</sup> (Tamari, 1992, p. 76)

<sup>30</sup> (Fanon, 2004, p. 9)



central reasons.<sup>31</sup> First, he unsettles the exclusionary undercurrents of a certain liberal humanism by affirming collective freedom in opposition to individual freedom.<sup>32</sup> This individualism seeks to establish a “human” connection with land and agriculture that is territorialized through new juridical and legislative structures to guarantee rights-based protection. Fanon does not reject humanism altogether but writes against individualistic humanism from his vantage point within the independence movement.<sup>33</sup> The constitution of a “human” subject for Fanon is intimately related to the mechanisms of colonial processes. Reading the centrality of land for colonized peoples through Fanon underscores the complex relationship of Palestinian subaltern consciousness and modern conceptions of the land. It is in these linkages, as I show in subsequent chapters, that the possibility for new political imaginaries emerges, seeking to neither essentialize the relationship to land nor allowing it to be effaced by colonial “forgetting”. This argument echoes that of Esmeir, who points out in her discussion of “juridical humanity” that Fanon “refused the notion that colonialism could confiscate the humanity of the colonized.”<sup>34</sup> In short, rights or humanity are not qualities to be endowed (meaning they can also be revoked) but rather to be understood as inhabiting a “prior” space, or if we prefer, situated on an ontological plane that is not exhausted by law.<sup>35</sup>

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<sup>31</sup> Fanon’s *critique* can be taken up in my argument, but his *conclusion* regarding revolutionary violence cannot. I thank Ajay Skaria for a clarifying discussion on this point.

<sup>32</sup> In *Keywords*, Raymond Williams (1983) defined liberalism as “a doctrine of certain necessary kinds of freedom but also, and essentially, a doctrine of possessive individualism” (p. 181). Humanism, for Williams, later became associated with “post-Enlightenment ideas of history as self-development and self-perfection” (Ibid p. 150). Following Williams, it might be described as the pursuit of individual self-improvement.

<sup>33</sup> There is considerable debate on Fanon’s humanism and on humanism in general. For examples, see Said (2004).

<sup>34</sup> (Samera Esmeir, 2012, pp. 6–8), also see her evocative piece, (S. Esmeir, 2006)

<sup>35</sup> (Samera Esmeir, 2012, p. 8)

I have claimed that the question of political being as it comes from Western metaphysics, while instructive, is inadequate for understanding the Palestinian practices of cultivation I describe in Part 2 of this dissertation. I propose to demonstrate that while these practices of being-in-common do not necessarily culminate in a nation-state imagination, they nevertheless give expression to a sense of political community that is bound up with a refusal to abandon the land.

*A Vernacular Theory of Shadow Spaces*

To recapitulate, this introduction has been discussing the ways that the question of land, made central by settler-colonialism, is bound up with the cultivation practices of Palestinians both in terms of dispossession and contestation. In response, I propose what might be called a *vernacular theory of shadow spaces* as a hermeneutic to explore the question of cultivation as outlined above. This theory is composed of four interlocking parts in which the two modes of the *question of cultivation* map onto the two senses of the concept of *zill-shadow*. Schematically, this can be depicted as follows:

The first sense of *zill-shadow* is the ruin or trace that haunts historical narratives and landscapes. The second sense of *zill-shadow*, as shelter, denotes a field of virtual potential that is concrete yet immaterial. The traces and ruins that haunt can be activated to generate new forms of political being. These two senses of *zill-shadow*, in turn, map on to the two modes associated with the *question of cultivation*: the politics of representation and the politics of persistence. In Part 1, of the dissertation, I show cultivation as formed by a practice and politics of representation that sediments

cultivation as an abstract concept meant to ground a (purportedly scientific) land use taxonomy. Specifically, I reveal how science and law combine in an effort to disembed Palestinian cultivation from its particularities and de-politicize land use, but how this effort to territorialize land for settlers is riddled by traces and ruins that serve as constant reminders of the contingencies and violence that have underwritten the settler-colonial enterprise. In Part 2, of the dissertation, I unpack cultivation as the mainstay of a politics of persistence that transgresses and disrupts the settler-colonial desire for territorial control. These practices of persistence, or steadfastness (*sumud*), not only keep the land question of settler-colonialism alive but also betoken possibilities for alternative political horizons.

To re-state my argument, a vernacular theory of shadow spaces shows how the zill-shadow haunts precisely in its capacity to shelter other forms of being. Cultivation can be understood as fugitive practices of refusal and contestation that interrupt the scientific object of cultivation.

One of the most penetrating thinkers on the relationship between history and land in the Arab world has been the Palestinian poet Mahmud Darwish. Through the last works of his long oeuvre, Darwish explored the figure of the defeated and the absentee. This figure allowed him to consider the relationship of history and geography for those thrust into the matrix of colonization. However, his remarkable contribution was that his persona was not a unitary figure. Rather, as Sinan Antoon has argued, Darwish often deployed the “You” (*huwa*) and “I” (*ana*) forms to brilliant effect, enabling the poetic

persona to converse with its internal other.<sup>36</sup> This allowed him to put the fractured persona of the defeated into productive tension by re-imagining the relationship of place and history. In other words, the fractured self explored the terrains of excluded histories without essentializing them. Darwish referred to these exclusions as the *aṭlal* or ruins of dominant historical accounts and defeats.<sup>37</sup>

The concept of *ẓill* (which I have translated in the double sense of shadow and shelter) is also Darwish's topos for the living historical trace. The *ẓill*-shadow enabled Darwish to imagine the convergence of past and present, presence and absence. Thus, as I have argued, the *ẓill*-shadow stands in simultaneously for ruin or exclusion but also potentiality. A conversation from Darwish's work of poetic prose, *Fī Ḥaḍrat al-Ghiyāb* (In the Presence of Absence), illustrates this:

In this field open to armed archeologists who do not stop questioning you:

Them: Who are you?

You check your limbs and said: I am I.

Them: We need the proof.

You: I am the proof.

Them: This is not enough. We need a nothing.

You: I am both a perfection and a nothing.

Them: Say you are stone so we may finish the excavation.

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<sup>36</sup> (Antoon, 2009)

<sup>37</sup> My thinking on Darwish has benefitted greatly from lively conversations with Ibrahim Muhawi and the exceptional scholarship of Sinan Antoon, both of whom who are translators of Darwish. See especially (Antoon, 2009) and Sinan Antoon's translator's preface in (Darwish, 2011).

You: If only the young man were a stone. And they did not understand you.

They removed you from the field. But your shadow did not follow you and did not deceive you. It was fixed there and turned to stone, then it turned green like the sesame plant, green in the day and blue in the night. Then it grew tall like the willow, in the day green, and in night, blue /

However far you are, you will be near / however much you are killed, you will live / so do not think that you are dead there / you are alive here / nothing establishes this and that but metaphor / the metaphor that makes of the shadow a geography / the metaphor that trained the creatures in the game of the words / the metaphor that will reunite you and your name / so rise with your people / higher and farther than the tradition of legends tells you and me / you, yourself write the history of your heart / since Adam fell in love / until the rise of your nation (*qawmak*) / and you, yourself write the history of your people (*jinsak*) / from when you gained from the sea her rhythm and breathing pattern / until your return to me, alive / <sup>38</sup>

*(My translation)*

Many rich concepts are at work in this excerpt. The zill-shadow is a living entity. But nothing proves whether you are dead or alive but metaphor. Green by day, purple by night. This is fairly ambiguous. Nothing establishes your proximity despite being far, and

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<sup>38</sup> Translation by the author from the Arabic. From (Darwish, 2009)

your life despite your killing, but metaphor. Metaphor thus is the act of imagination, the giving-form or activation of potential. Thus, the *zill*-shadow can be regarded as the trace left in the wake of official history or the space of potentiality that is the only presence possible. Because the fractured self (self-other or you-I) is unable to effect a full return to the memory of a place both physically and conceptually, the *zill*-shadow stands in as the living space of presence and potential.<sup>39</sup> As Antoon has argued, Darwish's illustration that return to the land or an essentialized past is only possible through the concept of *zill*-shadow, has become one of his most perceptive contributions.<sup>40</sup>

While scholarship on Darwish recognizes the sense of *zill*-shadow as that which haunts the other, the victor, in his dreams, the second sense of *zill*-shadow is frequently overlooked. My understanding of this second valence of *zill*-shadow comes from Arabic word itself. Roughly translated as shadow or shade, the word *zill* in Arabic does not possess the negative charge "shadow" often carries in English. The Arabic word can mean shadow or trace but also, shelter or protection. Thus, *zill*-shadow is that which shields one from the harsh sunlight and the elements but, equally, from danger and observation. In the latter formulation, *zill*-shadow becomes a powerful way to conceptualize forms of haunting that can shelter life or potential.

In this dissertation I employ Darwish's *zill*-shadow metaphor as a provocation to thought. Darwish calls for making of the shadow a geography through an active project of interpretation. His invocation of *zill*-shadow is both material and virtual: the physical ruins of villages decimated by settler-colonialism but also the ruins of lives and

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<sup>39</sup> I am indebted to (Antoon, 2009) for clarifying this point.

<sup>40</sup> (Antoon, 2009)

communities disrupted that continue to exist in memory and history. For Darwish, the *zill-shadow* shelters the traces of Palestinian life in this double manner. More profoundly, Darwish says that it is only by unleashing metaphor, or activation of *zill-shadow*, that establishes whether one is alive. In so doing, Darwish gestures to the potential embodied in *zill* – a potential that is dormant until activated the work of memory, writing, or (as I suggest) cultivation.

To summarize, I argue that the *zill-shadow* offers an evocative vernacular theory of the colonized in two central ways. First, *zill-shadow* is the figurative and material space of exclusion and ruin, whose spectral existence haunts the colonizer’s history of autochthonous achievement. These excluded spaces constantly disrupt the claim of triumphalist history by illustrating the constitutive violence and dispossession that are its conditions of possibility. The constitution of center via colonization and management of the margin is consistent with the argument of the Latin American philosopher Enrique Dussel, who has contended that “Europe” as geographic center of the world and self-proclaimed site of universal epistemology is itself an effect that would not have been possible in the absence of a relationship of coloniality to the margins or peripheries.<sup>41</sup> In other words, that which claims for itself the position of center is always enabled by the (effaced labors and resources of the) margin. It is precisely the striving to exclude the other that produces the self. This first sense of *zill-shadow as trace* informs my discussion of Part 1 of the dissertation.

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<sup>41</sup> (Dussel, 1994)

Second, as I have repeatedly noted, *zill-shadow* is the space of potentiality that is given form through a series of labored practices, including memory, writing, and cultivation.<sup>42</sup> Potential, of course, can be actualized in many ways. It may assume a reactionary form, as in the case of hyper-nationalist projects that seek to establish essentialist and exclusionary links between certain people and certain places. Darwish understood the pitfalls of this and guarded against it by rigorously maintaining that he “belonged to the question of the victim” (rather than, say, the nation).<sup>43</sup> For Darwish, *zill-shadow* shelters potential geographies that do not have to fall into established orders of the state; in my reading, Darwish left open the possibility for unforeseen forms of political community to emerge from within the fissures of colonial control. This second sense of *zill-shadow as shelter* informs Part 2 of my dissertation.

How does this vernacular theory of shadow spaces map onto individual dissertation chapters? As noted, my dissertation explores two senses of *zill-shadow* in relation to the question of cultivation. In Part 1, I explore the first sense of cultivation as an abstract political concept, examining the ruins and shadow spaces of its narrative of agricultural self-achievement. This gives expression to the first sense of *zill-shadow* as something that haunts and follows. Chapter One considers the production of Palestinian cultivation as a discrete object of knowledge, and Chapter Two explores how this object is taken up in juridical processes. In Part 2, I investigate the second sense of *zill-shadow* as shelter, a space of potentiality. Chapter Three considers the durability of rainfed

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<sup>42</sup> This may be considered in relation to dwelling for Heidegger, for whom form emerges through a process of *poesis* or giving form. Thus being for Heidegger is given form through a *working-with* and not the external grounding of an order. (Heidegger, 2001)

<sup>43</sup> (Darwish, 2008)



production as a practice of persistence, and Chapter Four explores how the cultivation practices of Palestinian farmers, far from being fully determined by a settler-colonial juridical logic, instead forms an “infrastructure of recalcitrance” for contesting domination.

These chapters do not seek to write a comprehensive history of Palestinian cultivation. Rather they aim to re-solder connections and relationships that have been rendered separate by colonial technologies of rule. In so doing, I hope to contribute to studies of comparative settler-colonialism by reconsidering the effects of a purported clean break between “traditional” and “modern” agriculture that pervades colonial histories and showing, furthermore, how such a break was enabled by geographic circulation of legal practices, materials, and ideas amongst settler colonies. In the latter half of the dissertation I focus on practices of cultivation mobilized by Palestinian farmers in spatially and temporally uneven, even discontinuous ways: far from being innocuous these practices, I suggest, constitute a ‘politics of persistence’ in their refusal to abdicate connection to the land in spite of ongoing Israeli attempts to sever such connection. In anchoring dignity and freedom to the cultivation of land, Palestinian farmers demonstrate a mode of political steadfastness that cannot be contained within the standard telos of freedom as establishment of an independent nation-state.

### **Summary**

Settler-colonialism is characterized by the lasting control over land. Dispossession of prior land users in self-professedly liberal settler-colonialist formations requires legal

justification for expropriation. Such justification emerges, I show, through the assessment and classification of cultivation practices through the operations of agronomic science. Concepts and metrics used to build an ostensibly scientific hierarchy of cultivation practices are not pre-given, but emerge in process itself.

However, as a variable, ongoing and embodied practice, cultivation also becomes a site of political action and being-in-common that challenges dispossession. These forms of political being are emergent rather than pre-determined by national identity; if there is a core it is their basis in an attachment to land, repeated efforts to affirm collective claims to it, and the refusal of prescribed subjectivities as subjects of state power. Such practices of cultivation thus emerge as a flashpoint to consider anew the question of territory and sovereignty or, in short, the land question.

### **Methodological Approach**

The dissertation considers the history of cultivation in Israel-Palestine and develops a theoretical understanding of cultivation as constituted by both colonialism and the oppositional politics arrayed around it. It draws on two primary sets of sources. First, I use materials from and about the Late Ottoman, British Mandate, and Israeli administrations to understand the constitution of the juridical category of cultivation. In categorizing land as either cultivated or uncultivated and subsequently reclassifying land, colonial powers have opened fields of action, intervention, and settlement.<sup>44</sup> A vast infrastructure of measurement and calculation was brought to bear on Palestinian

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<sup>44</sup> (Braverman, 2008; Fakher Eldin, 2008; Forman, 2009; Mundy, 2007)

cultivators: field surveys, test plots, experiment stations, surveys, aerial photography, and new crop trials. The relation of these processes to legal shifts must be considered historically to understand the process of state territorialization.

Second, the dissertation relies on Arabic-language personal papers, locally published books, court testimonies from the British Mandate period, and fieldwork to understand how Palestinian farmers and intellectuals understood and practiced cultivation. Fieldwork in the sense means that I spoke with dozens of agronomists, farmers, Ministry of Agriculture officials, and others to gain a sense of their situations but not with the intention of quoting them in this work.

I employ the concept of cultivation to open discussion of the historical relationship of land-use practices and legal classifications. Cultivation is indeed a human effort of tilling and planting but also of interpretation and re-imagination of political life. It is a kind of practice that works with the land but leaves a certain vegetative imprint that often ends up exceeding human intervention.<sup>45</sup> These overlooked cultivation practices and processes strike at the heart of the land regime in the West Bank, deploying the categorization of land as a wedge in the gap between the cultivated and uncultivated. The interplay between categories opens important questions about politics as constituted through concrete practice rather than abstract rights. This builds from a burgeoning field of environmental politics within geography and Middle East studies that explore relations of more-than-human life.<sup>46</sup> My hope is that the dissertation offers both fresh empirical insights into the relationship of cultivation practices to control over land, as well as a

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<sup>45</sup> (Mikhail, 2011; Mitchell, 2002)

<sup>46</sup> (Alatout, 2006; B. Braun, 2005; D. K. Davis & Burke, 2011; D. Davis, 2007; Mikhail, 2011; Mitchell, 2011a; Wainwright, 2005)

novel conceptual framework to consider the histories and geographies of settler-colonialism through what I gloss as a vernacular theory of shadow spaces. Key to my approach is the effort to understand the history of cultivation in Israel-Palestine not as a chain of chronological events but as a series of historical moments that are constantly summoned and reinvented in and for the present. This genealogical (as contrasted to a conventional historical) account yields not only a particular methodological approach of reading texts, practices, and landscapes but also a conceptual framework to explore the ways that traces of the past inhabit the present, relentlessly interrupting established historical narratives and sheltering alternatives.

## PART 1: CULTIVATION AS ABSTRACT CONCEPT

### **Chapter 1: The Question of Cultivation as Index**

Part One explores the first movement of the question of cultivation. Over the next two chapters, I will explore the *politics of representation* that produced cultivation as a scientific and legal object. I will take up this problem as part of a wider exploration of how cultivation of land is related to the appropriation of land within settler colonialism. Chapter One considers how modes of agricultural knowledge and coercion participate in the consolidation of control over land. Chapter two examines how legal processes call into being those modes of knowledge and coercion to justify the appropriation of land.

Modern scientific studies of Palestinian cultivation open with a consistent theme. As late as 1989, one prominent Israeli agronomist stated, “The Arab farmers, in common with all the farmers in the neighboring countries, practiced the typical Mediterranean agriculture, which, to all intents and purposes, had remained practically unchanged since biblical days.”<sup>47</sup> The idea persists, then, that local cultivation practices remained stagnant for millennia. In contrast, it is claimed, the intervention of the Zionist agricultural initiatives in the late nineteenth century brought about a radical change. Accordingly, the same author elsewhere stated, “The author has been active in agricultural research for over four

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<sup>47</sup> (I. Arnon, 1989, p. 79)

decades in a country that, during this period, has passed through all the stages of development from biblical agriculture to that of the twentieth century.”<sup>48</sup>

Pioneering scholarship on the history of scientific endeavors in the Zionist movement and their effect on Arab agriculture has effectively illustrated the fractured and contested course of the Zionist movement.<sup>49</sup> Studies such as those of Penslar reserve space for a detached Zionist technical intervention. More specifically, Penslar implies that the strategic interest in control over land came to prominence with the rise of what he calls “militant Zionism” in the 1930s.<sup>50</sup> However, more recent work from Sufian and Abu El-Haj on health and archeology, respectively, has broken new ground, asking whether regimes of knowledge writ large can be considered apart from the processes of dispossession.<sup>51</sup> The notion that Zionist agricultural interventions effected an absolute break with the past and local cultivation practices is often explained as the self-evident unfolding of natural logic.<sup>52</sup> However, this new strain of academic work within the emerging literature on comparative settler colonialism shows how scientific endeavors were the result of interaction across modern European settler colonies, whose defining characteristic is an attempt to consolidate control over land.<sup>53</sup> As we see below, it becomes difficult to sustain a separation between the early scientific endeavors that predate the forms of Zionism that Penslar discusses, and ongoing processes of dispossession. Oversights such as these highlight the necessity of a comparative settler

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<sup>48</sup> (I. Arnon, 1981, p. xvi)

<sup>49</sup> (Kamen, 1991; Penslar, 1991)

<sup>50</sup> (Penslar, 2000, pp. 217–218)

<sup>51</sup> (Abu El-Haj, 2001; Sufian, 2007)

<sup>52</sup> (Lockman, 2012, pp. 13–14)

<sup>53</sup> (Jabary Salamanca et al., 2012; David Lloyd, 2012; Lockman, 2012; Veracini, 2010; Wolfe, 2006)

colonial approach. Yet the arguments found below also *extend* the discussion on settler colonialism by exploring the way that legal practices participate in the logic of territorial control. In this critique, I rely on important recent scholarship on the production of juridical categories, especially that of the human, within colonial contexts.<sup>54</sup> This work however, does not address how the production of those subjects differs when the priority is placed upon state territorialization in settler colonial contexts.

From this basis, this chapter explores the twentieth-century genealogy of the concept of Palestinian cultivation. The chapter asks: What are the modes of reporting and exclusion that gave rise to Palestinian cultivation as a political abstraction? Exploration of the connections between colonial encounters and material forces illustrates the conjunctural nature of a concept like Palestinian cultivation. From the perspective of modern government, Palestinian cultivation is seen generally both as (a) external and deficient and (b) in need of intervention. More importantly, however these modes of reporting produce a concept of cultivation that is marked by its shadow: dispossession through the law. In contrast to a causal relationship, this chapter asks how staging the newly-formed concept of Palestinian cultivation participates in the consolidation of control over land.

The chapter is divided into two principal sections. Each section follows a particular operation of agronomic knowledge. I argue that these operations constitute—that is, do not predate—the emergence of intensive agricultural production in Palestine. First, I explore the circulation of ideas and materials among colonial scientific institutions

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<sup>54</sup> (Samera Esmeir, 2012)

through the modern history of standardized agricultural experimentation in Palestine. Second, I consider the concentration of agricultural knowledge in a particular site, an experimental farm where a series of experiments was designed to codify and evaluate a new abstraction: the Arab *fallah* (peasant) farm. The effaced stories, materials, and forces that have enabled the production of Palestinian cultivation are marked by traces left in the “shadow spaces” of conventional accounts. These overlooked spaces constitute the subject of this study.

## **SECTION I. THE BIRTH OF PALESTINIAN CULTIVATION AT THE AMERICAN STATION IN HAIFA**

The booming railroad town of Billings, Montana, in 1909 is an unlikely place to begin a story about Palestinian cultivation. But it was in October of that year that Aaron Aaronsohn, a prominent Zionist agronomist, addressed the Fourth Dry Farming Congress and its audience of concerned agricultural officials from the United States, Canada, Germany, Mexico, Brazil, and other countries. Billings, established in 1882 in the Montana Territory on the Northern Pacific rail line, had just mushroomed from 3,000 inhabitants in 1900 to 10,000 in 1910. Just thirty years before the congress in 1909, the area witnessed one of the last large-scale campaigns by Native American tribes in the American West. In 1876, Northern Cheyenne and Lakota Sioux bands staged a final insurrection, which ended in their defeat, dispossession, and confinement on reservations in the not-yet formed states of Montana and South Dakota. The history of the American



West, Ned Blackhawk has recently argued, cannot be seen apart from the regimes of violence that underpinned European settlement.<sup>55</sup> Frequent interaction with residents of the Northern Cheyenne and Crow reservations ten miles to the south of Billings would have served as a reminder of the living history of Native American life in the area. Thirty years later, Billings posed an attractive and convenient location to showcase the U.S. government's work in settlement of the semi-arid West through dryland agriculture. Indeed, hundreds of agricultural officials from these countries came together to discuss research into the intensive agricultural production in arid and semi-arid areas.

Aaronsohn, an agronomist and resident of a Jewish colony in Ottoman Palestine, arrived by train to address the assembly. He was on a tour of the United States at the invitation of the U.S. Department of Agriculture and was seeking funding to establish an agricultural research station in Palestine. Despite the town's bigger size and more rugged atmosphere, Aaronsohn must have felt a certain affinity in Billings among the pioneers of the American West. After all, he was working to establish Zionist settlements in Palestine. The two settler-colonial enterprises also shared a concern for the productive capacity of semi-arid farmland. His lecture on botanical explorations of Palestine found an eager audience, so eager, in fact, that he was urged to continue speaking beyond his allotted time.<sup>56</sup> Duly impressed with what he had seen in several Western states, Aaronsohn noted that "the successes are so numerous that they seem unbelievable."<sup>57</sup> However, Aaronsohn's address to the assembled agriculturalists was to highlight the long

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<sup>55</sup> (Blackhawk, 2008)

<sup>56</sup> (Shmuel Katz, 2007a)

<sup>57</sup> (A. Aaronsohn, 1910a, p. 162)

history of dry agriculture. He stated, “The lessons drawn from the past will show us the road to follow in the future and will prove, I hope, that the future of agriculture in the arid and semi-arid regions is most assured.”<sup>58</sup> In doing so, he linked the fate of the dry-farming efforts of those assembled under a single project tied ineluctably to the process of colonization. For with his visit to the United States, which he called a “study”, Aaronsohn sought to understand how insights from the dry farming experience of settlers in both Ottoman Palestine and the American West could mutually benefit newly established settlements.

Born in what is now Romania, he had traveled as a child to Palestine, where his parents helped establish the early Zionist settlement of Zichron Ya’akov.<sup>59</sup> Growing up in Ottoman Palestine in a one of the earliest Jewish settlements, he explored the countryside extensively and, like his generation of the earliest Jewish pioneers, learned Arabic and interacted daily with the Palestinian Arab community. His prominence grew as he returned from agronomy studies in France to work in the Rothschild-supported plantations in Palestine.<sup>60</sup> He soon began his own agricultural and geological explorations of Palestine with the help of prominent German scientists who were also conducting surveys in Palestine. He rose suddenly to international fame in 1906 when he announced to his German colleagues that he had finally identified the elusive wild relative of wheat, the wild emmer.<sup>61</sup>

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<sup>58</sup> (A. Aaronsohn, 1910a, p. 162)

<sup>59</sup> (Shmuel Katz, 2007a)

<sup>60</sup> (R. Aaronsohn, 2000; Shaul Katz, 2001)

<sup>61</sup> (Shaul Katz, 2001)

Aaronsohn traveled to United States at the behest of the USDA's David Fairchild, a noted botanist who had established its Office of Foreign Seed and Plant Introduction and is credited with helping to introduce 80,000 species to the United States.<sup>62</sup> Aaronsohn's purpose was twofold: to secure funding for the planned Jewish agricultural experiment station near Haifa and to explore the economic potential of crops native to Palestine in the dry areas of the United States, especially California. His U.S. trip culminated in a 1910 USDA Bulletin, *Agricultural and Botanical Explorations in Palestine*, which identified major native crops in Palestine that could be of economic value to the United States. His U.S. travels helped secure funding from philanthropists on the East Coast, and his charisma and confident knowledge of the Palestinian landscape endeared him to leading agronomists at the University of California and elsewhere.<sup>63</sup> In 1911, with private funds that he secured on his U.S. tour, he established the first agricultural experiment station in Palestine near Haifa.

How does this series of events relate to our opening question about the relationship of the question of cultivation to the consolidation of control over land? I would like to suggest that a series of four interlocking connections—evident in the work of Aaronsohn—forces us to reconsider the narrative of autochthonous achievement claimed by accounts of modern agriculture in Palestine.

First, Aaronsohn was the first to recognize local agricultural practices as such and study them systematically. This recognition is the first step. His mission for the station was the following:

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<sup>62</sup> (Clement, n.d.)

<sup>63</sup> (Shmuel Katz, 2007a)

It has to make an exhaustive investigation into the local forms of agriculture, however backward they may be from the modern standpoint, and to obtain a thorough knowledge of all the local practices and methods, as well as of their causes, before one is justified in giving them up in favor of methods which have been simply copied from other countries. To some of those in search of the latest methods, this will, no doubt, appear a thankless task. But those who possess real agricultural knowledge will not be ashamed to confess that they have too much respect for existing agricultural methods simply to pass them over.<sup>64</sup>

Aaronsohn's statement reflects a position expressed by scientists and activists of his early generation that sought to *recognize* the value of local agricultural practices in order to improve "modern" methods of the Jewish colonies. At first glance, such statements may seem at odds with the common denigration of local agricultural practices. However, this move to recognize constitutes the first step in producing a representational space that circumscribes and documents local agriculture. Aaronsohn's careful practices of gathering soil and rock samples, local seeds, and landraces, as well as conducting field trials and publishing articles, constituted indispensable technologies of reporting for that process.

Second, Aaronsohn benefitted from his extensive contacts with German and French scientists, including the renowned botanist at the University of Berlin, Otto Warburg, whom Aaronson assisted in early botanical explorations and who introduced

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<sup>64</sup> (A. Aaronsohn, 1911, p. 116)

him to the idea of agricultural experimentation in 1901.<sup>65</sup> As Penslar's impressive research has shown, Warburg's extensive agricultural work in the German colonies in West Africa provided him invaluable experience for the practical matters of "settlement engineering" in Palestine as a Zionist.<sup>66</sup> Together with Selig Soskin, another German agronomist, fellow Zionist, and former employee of the German colonial agricultural service, Aaronsohn was put in contact with elite circles of German botanical and agricultural researchers. His contacts in the German academy—in addition to their financial and moral support—were instrumental to publishing his findings in the top academic journals of his day and securing his reputation as a prominent agricultural researcher. Furthermore, Warburg and Soskin's support of Aaronsohn was material in securing funding and credibility for his agricultural research station, both in the Zionist leadership and foreign backers, based in no small part on their reputations built over years in the German colonial service. Warburg's long editorship of a tropical botany journal based on his explorations of Asia and private business ventures in cocoa, coffee, and rubber trade with German West Africa framed his ambitions in Palestine within a distinctly European colonial sensibility.<sup>67</sup> Moreover, Aaronsohn's training in France yielded extensive early contacts with French colonies in North Africa, where he conducted study visits, and he frequently cited their interventions, especially in new methods of olive production in arid environments.<sup>68</sup>

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<sup>65</sup> (Penslar, 1991, p. 67)

<sup>66</sup> (Penslar, 1991, pp. 60–79)

<sup>67</sup> (Penslar, 1991)

<sup>68</sup> (A. Aaronsohn, 1910b, p. 22)

Third, Aaronsohn's contacts with David Fairchild of the USDA made two things possible. He was given access to benefactors to fund his research center in Palestine with private donations from the United States, which enabled him to carry out the project with much greater freedom than official Zionist institutions enjoyed at the time. Also, Fairchild introduced Aaronsohn to the agricultural colonization efforts in the Western United States, including the land-grant system of agricultural colleges, advanced methods of dryland cultivation, leadership roles in the Dry Farming Congress, at least two extensive study tours of the United States, and contacts in U.S. government. So strong was the bond with Aaronson that Fairchild, a noted researcher, wrote an adulatory article in *Science* in 1910 announcing the establishment of what he described as an "American institution in the Levant and carrying the American experiment station idea abroad."<sup>69</sup> Furthermore, he announced that the USDA had outfitted the station with "the most complete set of American experiment station reports and bulletins to be found anywhere in the Old World."<sup>70</sup> And, according to Fairchild, Aaronsohn was given the opportunity to buy "as a nucleus of pathological work the collection of the late Professor W. A. Kellerman of about 24,000 specimens of fungi, and the Department of Agriculture has offered to supplement this with about a thousand other numbers."<sup>71</sup> Kellerman's rare collection of cereal rusts, for which he was known in the United States, would have been a precious acquisition for any fledgling research station, especially outside of the West.

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<sup>69</sup> (Fairchild, 1910)

<sup>70</sup> (Fairchild, 1910, p. 377)

<sup>71</sup> (Fairchild, 1910, p. 377)

In exchange, Aaronsohn sent the USDA samples of landraces for their own breeding programs. This complex interaction made research at the station possible.

Fourth, Aaronsohn's relationship with local Arab cultivators was complex. He belonged to a generation raised in a tiny settler community that depended heavily on the assistance and friendship of the overwhelming majority of local Palestinian Arab communities. On the other hand, Aaronsohn harbored a deeply suspicious and antagonistic relationship with the many Palestinians he employed at the research station. He believed strongly in the dominant role of scientifically trained specialists. However, his extensive employment of Arabs at the research station earned him the ire of newer generation of Zionists committed to Labor Zionism's virulently exclusionary labor politics. In fact, the early benefactors of his research station boycotted him over the extensive use of Arab laborers, believing that he should only employ Jewish laborers.<sup>72</sup> As Penslar argued, "Aaronsohn valued Arab labor for allowing the Jews to develop into an elite group of agricultural experts, not a brutish peasantry. Like other products of the First 'Aliyah, Aaronsohn was proud of his knowledge of Arabic and Arab ways, and he saw no reason why Jews and Arabs should not work together, so long as the former dominated the latter."<sup>73</sup> Fascinatingly, his 1910 bulletin used the local Arabic names for local crops (e.g. "Bint-el-Bascha") in addition to their Latin names.

However, Aaronsohn's clearly disparaging view of Arab agricultural practices was evidenced in his writings. Although he occasionally expressed respect for local knowledge, he believed local practices should be documented and placed in the service of

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<sup>72</sup> (Shmuel Katz, 2007a)

<sup>73</sup> (Penslar, 1991, p. 134)

settlement activities. A story recounted by Aaronsohn on the search for wild wheat illustrates this. Also note his use of Arabic:

The habits of these two plants are so similar that the Arabs fail to distinguish them, although they are given to more or less close observation of natural phenomena. Several times I have asked the Arabs to gather for me some stools of wild *Triticum* like the sample which I gave them. They always brought me back *Hordeum spontaneus*. Nor have I been able to find any special word in their language for wild wheat. They always called it “*scha'ir barri*” or “*scha'ir iblisse*” (wild barley or devil’s barley). But, when I asked if it was not wild wheat, they admitted that it was “*kamh barri*” (wild wheat), being eager, as the Arab always is, to agree with the opinion of a guest.<sup>74</sup>

The quote confirms his dependence on Arab assistants, no doubt also guiding him in the search leading to his discovery of the wild wheat and its announcement in German botanical journals. More crucially, these writings produce the effect of a sharp distinction between local knowledge produced under “centuries of stagnation” and the modern knowledge systems, based on Linnaean taxonomies.<sup>75</sup> Aaronsohn’s chief concern was “danger of the destruction of these races of plants in consequence of the general leveling which is a necessary accompaniment of national awakening and progress.”<sup>76</sup> He believed that the only way to ensure the future use of this unique genetic pool was through “exhaustive research” into existing peasant practices and seed stocks. Most importantly,

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<sup>74</sup> (A. Aaronsohn, 1910b, p. 45)

<sup>75</sup> (A. Aaronsohn, 1910b, p. 33)

<sup>76</sup> (A. Aaronsohn, 1910b, p. 33)



the results of this research would illustrate the “success of our colonization in Palestine” and connect it to the wider projects of European colonialism that he was deeply entangled with in the United States and Germany: “The results can be well compared with those to be obtained in other lands of colonization.”<sup>77</sup>

Despite his longstanding educational and scientific connections to European institutions, Aaronsohn made it clear that that American models of agricultural research offered the best way forward. Speaking to his audience in Montana about the need for more research in Palestine he stated, “Europeans, being afraid of new ideas, will never furnish these means and will never carry on these researches”.<sup>78</sup> Aaronsohn believed that the settlement project within the United States afforded its scientists a more useful vision than his European counterparts who explored distant lands for colonial extractive economies. It is as though for the first time, while on his tour of the United States, Aaronsohn saw a project of scientific inquiry that could work in the service of settlement, something that resonated deeply with his own vision for Zionist settlement of Palestine. He stated that the United States had “a geographical situation which enables the people of this country to understand and make use of all that is best in the East and West”.<sup>79</sup> Thus, it is the ‘geographical situation’ of the United States (understood here as the spatial patterns of settlement and control over land) that helps Americans to understand the importance of practical research, unlike European institutions that support exploration. For Aaronsohn, European *colonial* scientific institutions apparently did not fully

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<sup>77</sup> (A. Aaronsohn, 1911, p. 116)

<sup>78</sup> (A. Aaronsohn, 1910a, p. 171)

<sup>79</sup> (A. Aaronsohn, 1910a, p. 171)

understand the stakes of his scientific research in Palestine, whereas scientific endeavors in *settler-colonial* contexts like the United States aimed for new understanding of the land that would be the basis of a new society. Echoing language from the U.S. land grant research system that he would have witnessed on his tour, Aaronsohn told his American audience that research should have a “practical, economic importance, an importance which I dare to call social”.<sup>80</sup> Here the land question at the heart of settler-colonialism is revealed through Aaronsohn’s contrast of American and European interest in his efforts to establish a research station in Palestine.

Although the research station lasted only five years until the First World War and a lack of support caused it to close, its effect was felt in a generation of technically trained agricultural researchers in Palestine. Aaronsohn’s later exploits in espionage against the Germans have earned him a recent surge in interest and several general-audience books on the topic.<sup>81</sup> However, it is clear from the series of connections outlined above that, like Orientalist painters, Aaronsohn’s surveys, writings, and research programs staged, for the first time, an abstract representational space to gather the myriad local cultivation practices of Arab peasants under the sign of ‘Palestinian cultivation’. This representational space does not stand apart from the connections, some of which are described above. Rather, the abstract concept of cultivation emerges precisely from the encounter of settler-colonialism and its attendant scientific research arms. In calling for the preservation of local knowledge, Aaronsohn also effectively gathered the diversity of local practice under one category in the service of Zionist “national awareness and

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<sup>80</sup> (A. Aaronsohn, 1910a, p. 171)

<sup>81</sup> (Florence, 2007; Goldstone, 2007; Shmuel Katz, 2007b)

progress.” This had the important effect of making his scientific endeavors appear separate from the wider circulation of seeds, know-how, and capital through the settler-colonial processes of domination that made it possible. As we see next, another prominent agricultural scientist, Elazari-Volcani, took this representational apparatus to new heights in the next decade.

*Interlude: terrains of settler-colonialism*

Before moving to the second section of this chapter, I would like to pause to consider the promise of a comparative settler-colonial approach. While all modern colonial projects develop representational spaces for the study and classification of the vernacular geography, *settler-colonial* projects, whether in the United States, South Africa, Canada, or Australia, must relentlessly territorialize themselves for the purpose of settlement.<sup>82</sup> Though dwarfed by the devastation visited upon native and enslaved peoples in the Americas, Palestine’s Manichean spheres of human habitation offer a prism to consider the conceptual underpinnings of what might be called the land question of settler-colonialism. As settler-colonialism’s distinguishing feature, the control over land resides at the heart of its efforts to understand and in doing so, represent the spaces it settles. The texts by scientists, intellectuals, and writers showcased in this chapter guide us through a complex and often contradictory effort to codify Palestinian Arab knowledge, reshaping the terms of modern knowledge itself in the process.

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<sup>82</sup> (Abdulhadi et al., 2012; Bruce Braun, 2002; Kauanui, 2008; Warrior, n.d.; Wolfe, 2007, 2012)

What binds Palestine to other colonial spaces is the division of the world into compartmentalized oppositions. Following Timothy Mitchell, colonial power is derived from the bifurcation of the world into binary oppositions.<sup>83</sup> It is argued here that another understanding of knowledge production, one that shows its mixed and fragmentary nature, better apprehends how knowledge is produced and what effects it has. More importantly, however, it also troubles the exclusive legitimacy claimed by colonial expertise. What emerges is a species of history informed by the political-ecology tradition in geography that has taught us to understand the distinction between nature and culture, or politics and science, not only as enacted but also as a basis for the exercise of colonial expertise and power. This spatial history, as I call it, lays bare the previously unexplored connections between European settler enterprises as the Zionist project sought information and guidance from other colonial projects with experience in the Arab world and beyond.<sup>84</sup>

Examination of the technical texts and documents produced by Palestinians over the same period illustrates a vigorous debate regarding the complex transformations taking place. This gave rise to a contested field of knowledge, not a knowledge transfer as it is conventionally known. Building on pioneering work by scholars from India, I follow El Shakry's suggestion that other colonial spaces might hold clues about the relationship between knowledge and political life.<sup>85</sup> As such, in "tracing the development of a mode" of agricultural and environmental inquiry, it is hoped that we will also better

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<sup>83</sup> (Mitchell, 2002)

<sup>84</sup> (R. Aaronsohn, 2000)

<sup>85</sup> (El Shakry, 2007)

grasp the role of structures of knowledge in the historical process of dispossession. For it is in the production of objects of inquiry, wittingly or unwittingly, that regimes of intervention are made possible. The interventionist impulse that has transformed the Palestinian countryside has been largely divorced from the modes of scientific inquiry that have enabled and undergirded it from the beginning. While Israeli policies of land confiscation, water restriction, dispossession, and limitations on movement have been rightly cited for these transformations, the more subtle shifts taking place in the register of human reason and logic are left unnoticed.

Why is the settler-colonial context important? Because Palestinians were facing a project to take control of land for settlement of other people, their interest in modern knowledge historically centered on the need to remain, to persevere, and to retain their livelihood from working the land. Zionism clearly sought the reform of Palestinian life through various modes of governmental practices; the modes worked ultimately in the service of dispossession.<sup>86</sup>

The “clean break” between traditional and modern agriculture, thus, was the effect of a politics of representation that resulted in the emergence of abstract scientific-legal object. The emergence of this object catalyzed a governmental field of intervention that could both retain Palestinian cultivators as cultivators but also act upon their practices to reform them. The scholarly efforts to understand the emergence of the modes of government in colonial contexts has been well-documented<sup>87</sup> within postcolonial

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<sup>86</sup> (Penslar, 2000)

<sup>87</sup> This is a major literature but recent relevant examples include, (Alatout, 2009; El Shakry, 2007; Mitchell, 2011b; Sufian, 2007) Classic examples include, (Prakash, 1999; Sivaramakrishnan, 1999; Skaria, 1999); in Settler-Colonial contexts (Bruce Braun, 2002)

studies and subaltern studies, but the articulation of modern systems of knowledge *across* a settler-colonial space of difference has not. This is distinct from other colonial contexts because the settlement enterprise staged modes of knowledge to bring more land under its control. Settler colonialism distinguishes itself as both the control over land and settlement of Europeans in non-European spaces but also for its paradoxical reliance on local people for the survival and prosperity of the settlements.<sup>88</sup> This latter component of the settler-colonial “double bind” must be persistently suppressed to uphold the story of autochthonous accomplishment of the settlers. The land question, as a central feature of settler-colonialism, informs my exploration of the *politics of representation* used to produce cultivation as a scientific object.

#### **A WORD ON METHOD**

The material that explored here evokes a particular relationship of history and geography that I have called a vernacular theory of shadow spaces. Harnessing the double valence of the term *zill*-shadow as both trace and shelter, I argue traces haunt conventional histories of cultivation precisely in their capacity to shelter alternative accounts. In this way, the shadow space both marks a trace or ruin in a narrative or a landscape, but also shelters other forms of political and social community that await activation. More generally, such an understanding of history and geography enables me to explore not only the paths that were not taken at a given conjuncture, but also better understand the path that was taken. This approach is indebted to the genealogical method.

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<sup>88</sup> There is a long tradition of this comparison: (Abu-Lughod & Abū-Labān, 1974, p. -; Kayyālī, 1979; Kimmerling, 1983; Rodinson, 1973);

What is meant by a genealogy? Here I work from the tradition elaborated famously by Michel Foucault in which he contrasted conventional linear, event-based history with a genealogical mode that asks how something operates and comes to be naturalized. This means that Foucault didn't seek to explicate 'institutions' or 'theories' but rather 'regimes of practices' in order to understand the logics undergirding that practice<sup>89</sup>. Importantly, Foucault notes that the resulting narratives challenge dominant histories. He argued, "It's a matter of shaking this self-evidence, of demonstrating its precariousness, of making visible not its arbitrariness, but its complex interconnection with a multiplicity of historical processes many of them of recent date".<sup>90</sup>

How does one conduct genealogy? A crucial component of such an intellectual labor for Foucault is the role of "subjugated knowledges".<sup>91</sup> He believed these knowledges are best understood in two senses. First, 'buried knowledges' in which, "historical contents that have been buried and disguised in a functionalist coherence or formal systemization" and second as 'disqualified knowledges' that have been "disqualified from the hierarchy of knowledges and sciences".<sup>92</sup> These two senses offer a way of understanding both the buried and the disqualified classes of knowledge that underpin genealogical inquiry.

Antonio Gramsci, however, gives the subject of counter-history a more forceful valence by showing how critical consciousness emerges from the "certain specific

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<sup>89</sup> (M. Foucault et al., 1991, pp. 74–75)

<sup>90</sup> (M. Foucault et al., 1991, p. 75)

<sup>91</sup> (M. Foucault et al., 1991, p. 75)

<sup>92</sup> (Michel Foucault, 1980, pp. 81–82)

problems posed by reality".<sup>93</sup> In this way, Gramsci saw consciousness as inexorably linked to the surrounding circumstances of the philosopher and therefore not capable of being abstracted for the purpose of creating a general theory. Edward Said took up this political valence by showing how Gramsci was “programmatically opposed” to the “tendency to homogenize, equalize, mediatize everything, what we can call the temporalizing and homological function by which the whole problem of specificity, locality, and/or identity is reformulated so as to make equivalence.”<sup>94</sup> This reading of Gramsci’s intellectual practice extends Foucault’s insights on genealogical method: the outcome is an intellectual endeavor that unsettles established historical narratives. Moreover, this notion of counter-history dovetails with my notion of shadow space, in which the historical traces activate and enable unconventional histories and de-activate others.

Partha Chatterjee has recently commented on the status of a related intellectual project—Subaltern Studies—that sought to challenge dominant histories. Chatterjee noted a recent turn in the humanities and social sciences to the study of practices that “highlights the autonomous status of embodied or institutional practices whose significance cannot simply be read off texts describing the underlying concepts.” This does not mean, however, that specificity does not present its own problems. The price paid, Chatterjee says, for “the shift to the ethnographic, the practical, the everyday, the local”<sup>95</sup> is that they do not travel well. However, for Chatterjee, “The challenge is to devise appropriate

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<sup>93</sup> (Gramsci, 1971)

<sup>94</sup> (E. Said, 2000)

<sup>95</sup> (Chatterjee, 2012)



forms of writing that will preserve the integrity of the study, as well as make it accessible outside the region.”<sup>96</sup> This dissertation addresses this question of specificity by stating: theoretically rich insights emerge *precisely from* close attention to the specificity of a given situation. The tempting appeal to universality in theory is not always desirable and also negates the powerful theory-making potential of specific cases. In this way, shadow spaces offer opportunities for the actualization, both metaphorical and material, of their embedded traces. More importantly however, the insights from Foucault, Gramsci and Subaltern Studies illustrate how in the shift from ‘history’ to ‘genealogy’, the stability of categories like ‘Fellah’s Farm’ is called into question. In other words, by focusing attention on the historical traces that stitch together the present, I am better able to explore the moments when alternative trajectories and narratives were foreclosed. Moreover, as the double valence of the zill-shadow illustrates, I am better able to recognize that texts, landscape and memory shelter a variety of political possibilities that the colonized can activate.

The dissertation now continues with the exploration of the representational politics, in this case through agricultural experimental design, which produced cultivation as a scientific and legal object.

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<sup>96</sup> (Chatterjee, 2012)

## SECTION II. PALESTINIAN CULTIVATION UNDER EXPERIMENT

The *Marj ibn Amir* plain of northern Palestine, between Haifa and Nazareth, is well-known to Israelis and Palestinians. Also known as the Jezreel Valley or Plain of Esdraelon, the area was known as the breadbasket of Historic Palestine; its bountiful grain production was said to feed both Palestine and its environs. If you were to visit the area today, you would see a carpet of patchwork fields that elicits for Israelis the bygone utopian-agrarian era of early Zionism. However, for Palestinians, the *Marj ibn Amir* evokes one of the most painful chapters in the long struggle over land rights with the Zionist movement. The *Marj ibn Amir* became a primary foothold of the Zionist settlement project in the 1920s through a series of secret land purchases with absentee land investors in Beirut. The subsequent displacement of local peasants, the establishment of Zionist settlements, and the eventual expulsion of Palestinians from the area in April and July 1948 dispossessed Palestinians of the plain. As such, the area has long been a flashpoint for considering the cultivation rights of tenant Arab farmers. Over a period of about ten years after 1900, the Jewish National Fund succeeded in purchasing massive tracts of farmland in the *Marj ibn Amir*. The land deals exploited the fact that business families in Beirut owned much of the land and had little regard for the political implications or the fate of tenant farmers scattered in villages throughout the plain. The displacement of cultivators from their ancestral lands by the new owners and establishment of Jewish colonies on those lands caused massive upheavals of both peasant and urban Arab resistance, helping to cement Palestinian national consciousness

around the effects of land dispossession.<sup>97</sup> This section explores the lingering effects of a more subtle strain of the *Marj ibn Amir*'s history: an agricultural experimentation project conducted by Zionist agronomists in the 1920s.

It was in this context of upheaval and colonization that a leading agronomist working for the Jewish Agency embarked on radically new kind of experiment in Palestine. We saw in the previous section that the experimentation enterprise of Aaronsohn employed Arab cultivators and sought to understand their practices. However, this experiment sought to do what Aaronsohn had neither the resources nor interest to complete: a “scientific” comparison of peasant and modern agricultural systems. In doing so, the author of the study, Yitzhak Elazari-Volcani (Wilkansky), powerfully reproduced the *effect* of an absolute distinction between the two abstract concepts. Penslar has argued that Volcani (Wilkansky) played an instrumental role in the research arm of the Zionist agricultural efforts, calling him its “most eloquent spokesman” despite his writings being “steeped in an odd brew of anti-industrialism and technophilia.”<sup>98</sup> This was due to Volcani’s advocacy of the modernization of extensive, non-irrigated grain production built on careful and lengthy experimentation. This position eventually came to be considered retrograde by the Zionist movement, but Volcani’s role as director of the research organization for twenty years, through its absorption into the new Israeli state’s Ministry of Agriculture, was enshrined when the center was renamed the Volcani Institute.

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<sup>97</sup> (Khalidi, 2010, pp. 105–111)

<sup>98</sup> (Penslar, 2000, pp. 209–2010)

In his role as study director, beginning in 1914 Volcani began to carefully collect data from at least four sources. First, with Palestinian cultivators still living on part of their lands in the valley (probably unaware of their pending displacement), Volcani began to take careful notes on the lifestyle, household economy, and planting practices in 1914 of the 50-60 tenant farmers on 1,000 hectares living on land now owned by the Jewish National Fund (JNF). These observations collected by farm supervisors were carried out for ten years. Second, he collected records from his previous work at two experimental farms over ten years, 1909-1919. Third, Volcani and his assistants collected records from the farmers of villages adjacent to the experiment station. Fourth, and most importantly, Volcani hired a local peasant to farm a plot within an experimental block design for the purpose of comparing it to “modern production systems.”

Let us return to Tel al-Adas the village described in the introduction as the site of Volcani’s study. Volcani from the outset assumed the future dispossession of his research subjects, describing the land as “worked by tenant farmers until transferred to the new colonists.”<sup>99</sup> Thus, the about-to-be-displaced farmers constituted a precious opportunity for study of local practices; “the threshing floor and fields were supervised by watchmen in the employ of the company, and an exact record of crops was kept from year to year.”<sup>100</sup> The names of Tel-Adas, Jinjar, Jebata, and Tel Al-Fir, all villages whose inhabitants were displaced by the purchase of their land by the Palestine Land Development Corporation (PLDC) from external landlords, haunt Volcani’s text.<sup>101</sup> More

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<sup>99</sup> (I Elazari-Volcani, 1930, p. v)

<sup>100</sup> (I Elazari-Volcani, 1930, p. v)

<sup>101</sup> (I Elazari-Volcani, 1930, p. 32)

importantly, however, photographs of the soon-to-be-dispossessed people while winnowing, plowing, and harvesting haunt the text. The minutely detailed records, Volcani stressed, were collected while managing the land temporarily “before its transference for colonization purposes.”<sup>102</sup> The remarks column (see below in *Figure 1*) illustrates the displacement of a village by marking the end of a particular experiment. For example Volcani carefully notes that his data sources from the village of “Tel-Adas” ends in 1923– the year that corresponds to the establishment of the colony of Tel Adashim in its stead.

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<sup>102</sup> (I Elazari-Volcani, 1930, p. 33)

T a b l e 6.  
System of Farming and Specified Crop Returns (in Kels and Meeds) of Arab Tenants.

Year	Feddans	Number of Farms according to size in Feddans					Wheat	Barley	Horse beans	Lentils	Karsena	Chick peas	Durrha	Sesame	Remarks	
		1-2	2-3	3-4	4-5	5-6										
1914	48.5	11	7	3	2	1	3122-1	873-9	—	48-6	79-7.5	497-3.5	603-9	137-5	1 Feddan = 150 dunams=15 ha. Tenure—Tel-Adas	
1915	62	15	7	3	2	2	4370-8.5	778-6.5	290-5	24-1	58-9	—	286 —	—		
1916	46	11	7	4	1	1	2907-7	901-3	361-4	44-1	50-7	310 —	1217-3	951-1		
1917	51.5	12	5	7	2	—	3779-5	781-3.5	—	5-7.5	19-3	872-10	3744-9	—		
1918	54	19	6	5	2	—	2694-11.5	924-8	—	3-7.5	—	1132-2	2770-10.5	—		
1919	57	19	9	5	—	1	3688-9.5	1221-6	—	56-10	251-8	1622-9	238 —	108-4.5		
1920	57	20	8	4	1	1	3503-5.2	1088-3.5	—	138-2.5	204-1	1600-6.5	1315-3	322-2.8		
1921	61	17	11	1	1	—	1835-3.5	1031-7	—	85-8	120-9.2	767-4.8	239-10	—		
1922	55	13	9	5	1	1	2306-7.5	570-6.5	—	52 —	94-7.5	818-9	712-8.5	225-5.8		
1923	37	10	7	3	1	—	1956-6	535 —	—	19-10.5	43-7	170-2.5	336 —	130-7.5		
1921	39.5	—	—	—	—	—	910-6.2	671-11	—	12-0.8	74-4.5	399-11	256-7.5	9-11.8		Djendjire
1922	33	—	—	—	—	—	1400-10.5	523-4	—	10-7	30-2	209-11	348-11	105-0.5		—
1923	16.5	—	—	—	—	—	906-5	150-11	—	—	—	—	—	—		—
1921	46.5	—	—	—	—	—	1063-1	513-3	129-9	28-6.8	12-6.8	102-2.5	402-7	30-4	Nahalal	
1922	—	—	—	—	—	—	534-6	66 —	—	12-3.5	—	—	92-6	31-8	Tel-Alfire	

Sources of data: Material arranged and condensed by the author from yearly accounts between the Palestine Land Development Company and tenants on an area of about 10,000 dunams, before its transference for colonisation purposes.

T a b l e 6.  
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Year	Feddans	Number of Farms according to size in Feddans					Wheat	Barley	Horse beans	Lentils	Karsena	Chick peas	Durrha	Sesame	Remarks	
		1-2	2-3	3-4	4-5	5-6										
1914	48.5	11	7	3	2	1	3122-1	873-9	—	48-6	79-7.5	497-3.5	603-9	137-5	1 Feddan = 150 dunams=15 ha. Tenure—Tel-Adas	
1915	62	15	7	3	2	2	4370-8.5	778-6.5	290-5	24-1	58-9	—	286 —	—		
1916	46	11	7	4	1	1	2907-7	901-3	361-4	44-1	50-7	310 —	1217-3	951-1		
1917	51.5	12	5	7	2	—	3779-5	781-3.5	—	5-7.5	19-3	872-10	3744-9	—		
1918	54	19	6	5	2	—	2694-11.5	924-8	—	3-7.5	—	1132-2	2770-10.5	—		
1919	57	19	9	5	—	1	3688-9.5	1221-6	—	56-10	251-8	1622-9	238 —	108-4.5		
1920	57	20	8	4	1	1	3503-5.2	1088-3.5	—	138-2.5	204-1	1600-6.5	1315-3	322-2.8		
1921	61	17	11	1	1	—	1835-3.5	1031-7	—	85-8	120-9.2	767-4.8	239-10	—		
1922	55	13	9	5	1	1	2306-7.5	570-6.5	—	52 —	94-7.5	818-9	712-8.5	225-5.8		
1923	37	10	7	3	1	—	1956-6	535 —	—	19-10.5	43-7	170-2.5	336 —	130-7.5		
1921	39.5	—	—	—	—	—	910-6.2	671-11	—	12-0.8	74-4.5	399-11	256-7.5	9-11.8		Djendjire
1922	33	—	—	—	—	—	1400-10.5	523-4	—	10-7	30-2	209-11	348-11	105-0.5		—
1923	16.5	—	—	—	—	—	906-5	150-11	—	—	—	—	—	—		—
1921	46.5	—	—	—	—	—	1063-1	513-3	129-9	28-6.8	12-6.8	102-2.5	402-7	30-4	Nahalal	
1922	—	—	—	—	—	—	534-6	66 —	—	12-3.5	—	—	92-6	31-8	Tel-Alfire	

Sources of data: Material arranged and condensed by the author from yearly accounts between the Palestine Land Development Company and tenants on an area of about 10,000 dunams, before its transference for colonisation purposes.

Figure 1: page 33 from Elazari-Volcani, "The Fallah's Farm" (1930)



Mending the plough



First ploughing

Figure 2: page 17 from Elazari-Volcani, "The Fallah's Farm" (1930)

Founded on the displaced Jebata village, the new Zionist settlement of Gevat was set up in 1926.<sup>103</sup> In the same year of its establishment, Volcani reserved 340 acres for grain experiments, making it an official branch station founded by his new research institute five years before. This was part of a larger effort of the Jewish Agency to build a research infrastructure “based in principle on the land-grant college model” of the United States.<sup>104</sup> Established in 1921 near Rehovot by the Keren Hayesod and then handed over to the Jewish Agency for Palestine, the institute sought to provide a rigorous, evidence-based approach to agricultural colonization. Writing in 1932, Volcani said that the station would host one of the agricultural divisions focused on grain.

The Institute has a Central Station at Rehoboth and a branch at Gevath, Valley of Esdraelon. The offices, the laboratories, and the Citrus, Feeding, and Extension Divisions are in Rehoboth; the agricultural divisions at Gevath. At the Central Experimental Station, there are about 325 acres devoted to experiments in plantations, field crops, and vegetable. At the Station Jebata in the Emek, there are 340 acres devoted primarily to grain experiments.<sup>105</sup>

One of the most striking features of this quote is that Volcani interchangeably uses both the original Arabic name and the newly imposed Hebrew place-name: “Gevath” first and “Jebata” later. This interchangeable use of both the displaced Palestinian village’s name and the name of the new settlement marks the lingering legacy of the recent dispossession. How exactly was Palestinian cultivation isolated and produced as an

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<sup>103</sup> (Huneidi, 2001, pp. 224–225; Khalidi, 2010, p. 113); Moshe Dayan’s famous quote about no part of Palestine without Arab inhabitants included Gevath/Jabata in the list. (E. W. Said, 1979, p. 8)

<sup>104</sup> (I. Arnon, 1989, p. 652)

<sup>105</sup> (J. Elazari-Volcani, 1932, p. 92)



abstract object? In other words, if we are exploring the *politics of representation* in this chapter, how did the experimental design of Elazari-Volcani in Jebata begin to build a frame of representation for Palestinian cultivation?

*Shadow Spaces of the “Arab Fallah” Experiment*

The Jebata/Gevath agricultural research farm and settlement in the Galilee hosted a seemingly unremarkable encounter in 1926. An Arab man from the Palestinian farming village of al-Mujaydil was brought by a Jewish agricultural scientist to cultivate a patch of land at the experiment station. The farmer, his wife, and their four children, among others, were asked to work the plot in a traditional manner:

The area set aside for the primitive system is cultivated strictly with the prevailing system. To ensure greater certainty, this portion has been handed over to an Arab fallah, who cultivates it as his own expense, according to his own methods without any influence on our part, the Division simply taking exact notes on his methods of cultivation, hours of work, the cost of maintaining his working teams and of providing essential food requirements.<sup>106</sup>

We would have very little information were it not that Volcani mentioned in a side note that the fallah’s family hailed from al-Mujaydil. It was a relatively large town of 2,000 Arab inhabitants. Perched on the south face of an escarpment 250 meters in height, it looked over the *Marj ibn Amir*, the famed Galilean plain of about 380 square kilometers

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<sup>106</sup> (I Elazari-Volcani, 1930)

that was known as the breadbasket of Palestine. It had a mixed Muslim-Christian Arab populace that mostly depended on agriculture. The two churches, Eastern Orthodox and Roman Catholic, each had schools. A religious elementary school accompanied the village mosque. The town also hosted a health clinic and state school. Comparatively prosperous, al-Mujaydil boasted two cereal mills and two olive presses, making it an important processing center for local farmers and, as it were, Jewish settlers in the early years of the *Yishuv*. The international connections and intensity of agricultural production in the *Marj ibn Amir* plain is illustrated by longstanding exports of wheat to Italy for pasta and barley to Germany for alcohol production.<sup>107</sup> The village classified its holding into two land types common to Palestine, *wa'ar* (rugged, hilly) and *marj* (plain). Jaber Nassar, whose self-published memory book describes the social and agricultural history of the town, declared, “Al-Mujaydil, if compared with other Palestinian villages, would be called ‘blessed’ because of its location about 300 meters above sea level, its large expanse of lands, and its abundant water and natural springs.”<sup>108</sup>

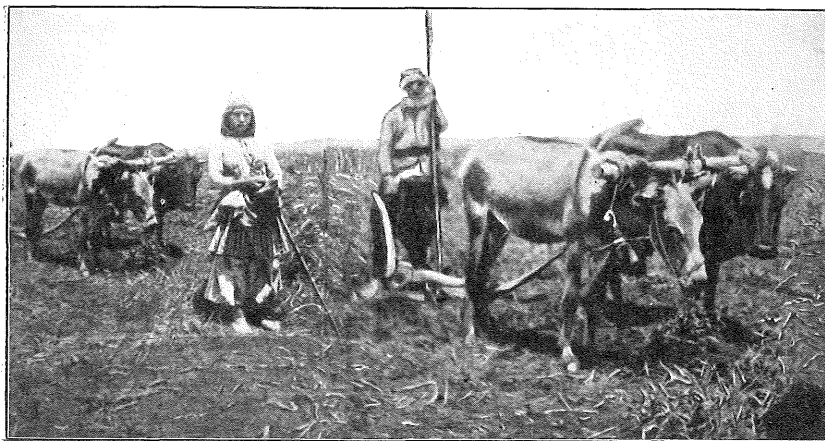
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<sup>107</sup> (Shafir, 1989, p. 29)

<sup>108</sup> (J. Nassar, 1991, p. 14)



The fellah coming to work, Gevath Exp. St.



Sowing sesame with a funnel, Gevath Exp. St.

**Figure 3: page 83 of Elazari-Volcani, "The Fallah's Farm" (1930)**

Al-Mujaydil was known to be politically innovative, establishing a pioneering form of village council to lead internal affairs. The three schools meant that its upwardly mobile villagers played an active role in the growing agitation against British officials for collusion with the Zionist settlement projects in the Galilee. Together with other nearby towns such as Saffuriyya, it provided numerous volunteers for the peasant backbone and higher leadership of the Arab rebellion of 1936-1939 against British Mandate authorities. According to some accounts, dozens of people from the al-Mujaydil village participated. Mujaydilis were particularly known for sabotaging the recently built British-sponsored pipeline that stretched from the oilfields of northern Iraq more than 600 miles to the Mediterranean through the refinery and port in Haifa. The pipeline passed at the foot of the village, weaving through *Marj ibn Amir* just before reaching Haifa.

An event in January 1938 illustrates the village's daring. On this day, as they had done numerous other times, local rebels severed the pipeline. The increasingly frustrated and repressive British Mandate authorities arrested all of the men of the village in one raid on January 21, 1938. The women in the village protested, eventually going to Nazareth, where they were joined by other women's groups, and demonstrated outside the military and government headquarters. In response, at least one source states that most of the men were released and two men who had been sentenced to death had their sentences commuted to life in prison.<sup>109</sup>

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<sup>109</sup> Yāsīn, Şubhī M. (1961). *al-Thawrah al-'Arabīyah al-kubrā fī Filasṭīn, 1936-1939*. Damascus. pp. 91-92. (Swedenburg, 1995, p. 237)

Ten years before the protest, from 1926 to 1929, this village provided the peasant subject for the research farm's elaborate experiment to scientifically establish the primacy of modern agriculture in Palestine.<sup>110</sup> This apparently ordinary encounter between an agricultural scientist and a peasant, however, staged what was to become one of the most pervasive narratives in modern Palestinian history. For this particular experiment became a chief scientific warrant for the mythology that the Zionist movement, through its deployment of modern science, redeemed the Holy Land from the dilapidated situation produced by Arab habitation.<sup>111</sup> The experiment results, published in 1930, claimed to form the scientific basis for the superiority of modern agricultural methods in opposition to the traditional farming of Palestinian peasants.<sup>112</sup> Scholars note that modern scientific knowledge was situated at the heart of the Zionist colonization project in Palestine through numerous fields, such as agronomy, hydrology, geology, archeology, medicine, and epidemiology. Paradoxically, this knowledge production enterprise hinged on collecting local knowledge about Palestinians. In July 1930, upon publishing the results of his study, the scientist directing the project stated, "Good relations with the Arab neighbors at the places mentioned facilitated the gathering of data. The fallahs understood that the questioners had no motive but to study conditions and to devise methods of increasing yield."<sup>113</sup> The systematic process of dispossession of

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<sup>110</sup> Ostensibly an experiment, which assumes that a hypothesis is being tested, Elazari-Volcani made it known that only one farm system could serve as a model: "The mixed farm is the only one which can serve as an example in respect of the standard of life which assures its owner, and it is this which is the chief point of departure for all the reforms which it is proposed to introduce in the other types of farms," (I Elazari-Volcani, 1930, p. 68)

<sup>111</sup> (Kamen, 1991, p. 211)

<sup>112</sup> Elazari-Volcani explained his presuppositions on several occasions. He gave a clear chronology and teleology: "At opposite poles are the entirely primitive farm of the fellah and the consolidated mixed farm, while between them, the remaining types constitute gradual steps in development." (I Elazari-Volcani, 1930, p. 67)

<sup>113</sup> (I Elazari-Volcani, 1930, p. iv)

the *Marj ibn Amir* only inhabits the text as a specter. But, following Darwish, the zill-shadow harbors the potential for the activation of future histories and imaginaries.

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The Galilee convulsed with colonial violence within eighteen years of the agricultural experiment. For ten days in July 1948, Israeli forces implementing Operation Dekel moved methodically through at least fifteen villages, “cleansing” thousands of Palestinians. On July 15, 1948, the Golani Brigade of the Haganah militia took control of al-Mujaydil and expelled its population. Al-Mujaydil and the neighboring village of Saffuriyya were subject to a new tactic designed to terrorize the local inhabitants: bombing from the air.<sup>114</sup> On that day in July, Jewish soldiers must have encountered a largely deserted town, its inhabitants taking refuge in the nearby city of Nazareth, believing that city would be spared for fear of European backlash. Nassar recounts that the town was deserted “except for a number of elderly and women who were dragged to the threshing floor area which was used as assembly point, where trucks appeared and they were forced to get on without any belongings and transferred them to Nazareth and where they were left to find the other members of their town.”<sup>115</sup>

Jettisoned in Nazareth, the newly displaced and dispossessed farmers of al-Mujaydil tried to reach their abandoned fields to harvest crops they had planted that

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<sup>114</sup> “In fact, what developed in July was ethnic cleansing from the air, as air attacks became a major tool for sowing panic and wreaking destruction in Palestine’s larger villages in order to force people to flee before the actual occupation of the village” (Pappé, 2006, p. 172).

<sup>115</sup> (J. Nassar, 1991, p. 76)

spring. They were met with a fierce response. Morris describes the scene based on Zionist archival sources:

In August 1948, a Jezreel Battalion Golani patrol encountered “groups of Arab women working fields” near Al-Mujaydil, and they reported that: “I [squad OC Shalom Lipman] ordered the machine-gun to fire three bursts over their heads, to drive them off. They fled in the direction of the olive grove ... .” But after the patrol left, the villagers returned. The patrol came back and encountered “a group of Arab men and women ... . I opened fire at them and as a result one Arab man died and one Arab man and one woman were injured. In the two incidents, I expended 31 bullets.” The following day, 6 August, the same patrol encountered two Arab funeral processions. The commander remarked dryly that, “one can only assume that one of yesterday’s wounded died.” A day or two after, the patrol again encountered “a large group of Arab women in the fields of Mujeidil. When we approached them to drive them off, an Arab male [was found] hiding near them, [and] he was executed by us. The women were warned not to return to this area of Mujeidil.” The company commander commented: “Arab women repeatedly attempt to return to Mujeidil, and they are usually accompanied by men. I gave firm orders to stymie every attempt [*lehasel kol nisayon*] to return to the village of Mujeidil.”<sup>116</sup>

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<sup>116</sup> Quoted in (Morris, 2004, pp. 445–446). According to (Morris, 2004, p. 460), “Battalion HQ to Golani\Intelligence, 8 August 1948, IDFA 128\51\32 The report says that the executions occurred on ‘3.8.48’, but this would seem to be an error; it should probably read ‘7.8.48.’ The use of the word *lehasel*, literally, ‘to liquidate,’ is indicative. Also typical is the shift to passive mode when reporting the executions.”

The complication internal to the expulsion of hundreds of thousands of Palestinians in 1948 was that those who were able to stay near their homes kept trying to reach their fields. Lt. Gen. John B. Glubb of the British Army illustrated the “infiltration” problem of farmers seeking to tend their crops in late 1948:

Some deep psychological urge which impels a peasant to cling to and die on his land. A great many of these wretched people are killed now [by the Israeli army], picking their own oranges and olives just beyond the [frontier] line. The value of the fruit is often negligible. If the Jewish patrols see him he is shot dead on the spot, without any questions. But they will persist in returning to their farms and gardens.<sup>117</sup>

The violence exacted on farmers trying to salvage their crops was meant to set an example for the rest. For the Zionist project, at least in this part of the storied *Marj ibn Amir* plain, the Palestinian peasant had transmuted from research subject to menace in less than twenty years.

Within a few years, the nascent Israeli state had bulldozed the village (along with hundreds of others) and carried its valuable stone away for construction elsewhere. Fast-growing evergreen saplings were planted over the remains. In 1950, under strong pressure from the Vatican, the town’s Christians were offered the chance to return to the village but refused, in part, because their Muslim neighbors were not included.<sup>118</sup> The entire village, save for the town’s two churches and mosque, was bulldozed. By 1952, the Israeli government had founded a new settlement for Iranian Jewish immigrants, known

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<sup>117</sup> Quoted in (Fischbach, 2003, p. 76)

<sup>118</sup> (Pappé, 2006, p. 153)



as Migdal ha-Emek, upon the ruins. Six kilometers away in Nazareth, the people of al-Mujaydil had jammed into the houses of relatives and friends, sleeping on monastery grounds and in other impromptu locations, now severed from their land.<sup>119</sup>

Nassar said that he wrote his village history book lest future generations forget that al-Mujaydil was in fact an Arab village whose inhabitants were forced out, unlike the description given by tour guides today of “remains of Roman villages that were destroyed over time by earthquakes and other natural disasters.”<sup>120</sup> The author of this particular memory book was one of the few who was able to remain in historic Palestine as an “internal” refugee and was able to describe the destruction, aftermath, and effacement (*tams* as he calls it in Arabic) of the village where he was born in 1919. Because of the density of the trees that were planted, Nassar was not able to locate his family’s home in the village. He said that he was able to locate the homes of others from their wells, noting, “The occupier has tried to disguise the remains of the occupied villages by a variety of methods”.<sup>121</sup>

According to Nassar, some olive groves remained intact after the occupation. Faced with a lack of knowledge about olive production and a labor shortage, the new Israeli occupants accorded some village families the indignity of picking their own olive groves for a harvest-share, an arrangement traditionally reserved for day-laborers.<sup>122</sup> This situation was repeated in other parts of Palestine, most notably in the vast citrus groves of the Jaffa area, where Palestinian refugees who had remained within Israel were brought

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<sup>119</sup> (J. Nassar, 1991, p. 76)

<sup>120</sup> (R. Davis, 2011)

<sup>121</sup> (J. Nassar, 1991, p. 5)

<sup>122</sup> (J. Nassar, 1991, pp. 82–83)

back to work their own family's former orange groves, transforming them from proprietors to contracted manual labor.<sup>123</sup> We see in the next chapter how legal categories like the 'cultivated land' and 'absentee property' were produced in the wake of this dispossession. These categories, especially following the creation of the Custodian of Absentee Property, link the question of cultivation with the legal processes required to consolidate control over land after 1948.<sup>124</sup>

### *Palestine-as-Experiment*

Samera Esmeir's recent work has brilliantly described a central temporal function of modern law: "In its quest to homogenize the world, the colonizing power of modern law was directed not only at the present but also at the bond between the present and past."<sup>125</sup> Similarly, Mitchell has recently called for exploration of processes by which technical projects "produce the forms of distance, separation, concentration, and difference that could be organized into the distinction between modern environments and modern environmental imaginaries."<sup>126</sup> In this section we explore two central operations that enable Volcani to posit an absolute break between present modern agricultural production as essentially apart from past local practices in his study of the "Fallah's Farm."

First, Volcani sought to establish the unchanging, deficient character of the peasant agricultural system. This is most explicitly stated at the opening of his chapter on the experiment itself:

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<sup>123</sup> For example, see interviews with Hassounch family in (Sivan, 2010)

<sup>124</sup> (Fischbach, 2003)

<sup>125</sup> (Samera Esmeir, 2012, p. 22)

<sup>126</sup> (Mitchell, 2011a, p. 270)

In general the plan follows two main lines: that adopted in existing farms in accordance with their essential characteristics, and the new line marked out by the division of Agronomy and the Division of Plant-Breeding. In regard to the first, the system of farming is carried out on set lines without any alternation; while in the second, the farm is worked according to those positive results which have been obtained by the various divisions of the Experimental Station.<sup>127</sup>

At the level of experimental design, Volcani reveals his understanding of the ontological divide between systems. Here the fixed, unchanging, “essential characteristics” of existing farms are compared with the “new line” based on experimentation, change, and progress. At the level of description, Volcani states this position frequently: “From the time of Ruth up to this day there has scarcely been any change, neither in the methods of its operation nor in its notions.”<sup>128</sup> And, with regard to the appearance of Arab villages, “The whole village both in its external appearance and in its structure seems to have risen out of the soil on which it stands.”<sup>129</sup> Here local practices have fossilized unchanging essence through both the experimental design itself and in descriptions of Arab Palestinian cultivators. This narrative of the unchanging character of agriculture clearly demarcated a space within which metrics of evaluation on the status of cultivation could be brought to bear.

Second, the execution of the experiment began from the premise of two hermetically sealed groups of experiments: “Results of Experiments in Modern Farming”

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<sup>127</sup> (I Elazari-Volcani, 1930, pp. 65–66)

<sup>128</sup> (I Elazari-Volcani, 1930, p. 28)

<sup>129</sup> (I Elazari-Volcani, 1930, p. 40)

and “Results in Experiments in Fields of the Fallah.”<sup>130</sup> Thus, the experiment starts from an inherent, essential divide between the two. The experiment was set up in the following manner. An area of 250 dunams (61 acres) was divided into seven units to test various cropping systems. One unit of 60 dunams (14.8 acres) was left to the “the fallah of the neighboring village of Medjdel,” who worked it at his own expense. The peasant plot was further divided into six plots of 10 dunams (2.46 acres) each. Elazari-Volcani organized these plots into various two-year crop rotations: (a) wheat (*Triticum durum*) and a legume (like *Cicer arietinum*), (b) wheat and sorghum (*Sorghum bicolor*), and (c) wheat and sesame (*Sesamum indicum*). The experiments included one experimental treatment with fertilizer in the ‘Arab’ cropping pattern and one without. The peasant plots were adjacent to the other plots run by the experiment station. The peasant’s tillage practices, his crops, and minute details of his life were carefully recorded, including what he ate, including the timing and cost, as well as the cost of his clothing and descriptions of his daily schedule. As with many experiments, the number of variables was reduced to one or two. Specifically, the experiment aimed to determine the best way to improve soil fertility through three different conservation strategies: (a) fallow, (b) green manure, or (b) row planting. The various rotations in the predetermined “modern” and “fallah” group were compared against those treatments. Notably, Volcani described the results of the “fallah” experiments in detail, drawing extensive conclusions about their viability and future recommendations, but he spared this extrapolation in the analysis of the “modern” systems. This was because “all of the factors of production in modern farms have been

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<sup>130</sup> (I Elazari-Volcani, 1930, p. 83;90)

specially studied on hundreds of actual farms (not experimental ones), the results of which have been published in separate treatise.”<sup>131</sup> According to Volcani, it follows, leniency was not accorded the “fallah” system because its essential characteristics were known in advance. Therefore, unlike the modern farm, for Volcani the “fallah farm” stands alone as an “organic unity” in which the farmer is “not dependent on external economic factors and he is not affected by the changes and vicissitudes of the outer world.”<sup>132</sup>

The timeless, unchanging character of the Fallah’s Farm then is made possible through a series of occlusions within the experimental design, such as the grouping of treatments. Myriad factors are shared, and the separation between the two categories is constantly undermined by the eruption of natural forces (such as mice and drought in this case) and by the mixed way in which the modern is always already enabled by the effaced labor of the local. Only close attention to the details of the experiment itself and the circumstances of its execution offers this vantage point. While the results of the experiment provide an intriguing view of the mechanics of colonial science, it is the experiment’s unintended byproduct that offers the most important contribution: the staging of Palestinian agriculture and society as discrete objects of inquiry and intervention.

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<sup>131</sup> (I Elazari-Volcani, 1930, pp. 90–91)

<sup>132</sup> (I Elazari-Volcani, 1930, p. 39)

### SECTION THREE. CONCLUSION

This chapter has explored a series of connections between agricultural practice, knowledge, and politics. It argues that this situation gave rise to the abstract conception of Palestinian cultivation, creating the *effect* of its autonomy from the processes that brought it into being. This politics of representation relied on what I have called an index used to evaluate cultivation, something that was produced through the regimes of scientific experimentation explored above. Unlike most scholarship on the history of Historic Palestine, this cultivation index is not considered in isolation to systems of representation in other colonial spaces—as something apart from the colonial encounter. Indeed, I have sought to understand how the enterprise of modern scientific knowledge-making articulates *within* the colonial encounter of violence, domination, racial orders, and ethnic hierarchies. Until now, the kinds of knowledge produced by the nameless fallah in Elazari-Volani’s studies have been considered on their own terms as facts, divorced not only from the production of those objects of knowledge as such but also from the devastation that convulsed Palestine within a few short years. By contrast, this dissertation investigates knowledge production through that which stands in its shadow. In concrete terms, this would mean that the agricultural knowledge and its connections to other settler-colonial encounters cannot be understood but in relation to its shadow spaces: the erasure of Jebata, the displacement of Tel-‘Adas, as well as al-Mujaydil’s bombing, ethnic cleansing, and demolition within twenty years.<sup>133</sup> These events do not elaborate a causal relationship as conventionally understood between agronomic

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<sup>133</sup> Think about this more because topographically the experiment station also literally stood in the shadow of Al-Mujaydil.

experimentation and dispossession; rather they mark the question of cultivation in Palestine and illustrate the development of an analytic basis for future legal actions to consolidate control over land. Thus, my contention is not that agronomic research directly causes dispossession, but rather that the representations of local agriculture generated by this research enable dispossession by providing scientific warrant for settler colonialism at various moments in time. Hence, agronomic representations become a vital element in the repeating re-invention of the past for the present. This is what I have called the politics of representation that produces Palestinian cultivation as an abstract object. I explore this claim in the next chapter.

This genealogical method of study also gives rise to new perspectives on the spatial history of knowledge in Palestine.<sup>134</sup> Namely, it is not possible to understand those spatial histories without shining light into the shadows, the margins of the narrative of modern progress. There, obscured from view, are the living remnants, what Mahmoud Darwish has called the “shadow geography,” that relentlessly surface to trouble the easy assumptions of colonial orders of knowledge and self-evidence. This chapter has explored the relationship of agricultural research and control over land as well as its structural connections to similar projects of territorial control in the United States. The shadow spaces, both material and narrative, haunt the conventional account of agricultural achievement. It is precisely in their capacity to shelter other accounts, that other stories haunt dominant histories.

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<sup>134</sup> Spatial history is a method popularized by Paul Carter and others but has more recently re-emerged, e.g. Craib, R. B. (2004). *Cartographic Mexico: a history of state fixations and fugitive landscapes*. Durham, N.C.: Duke University Press.

Let us return to the village of al-Mujaydil. The only structures spared when al-Mujaydil was bulldozed, two churches and a mosque, survived for decades. The Catholic church, *Dayr al Malāk Jibrāil* or the Convent of the Archangel Gabriel, was protected by Vatican intervention and has stood intact as the new Israeli town engulfed its tiny structure. It remains in use by former residents of the town.<sup>135</sup> The dilapidated mosque building was demolished in 2003 to make room for a shopping center. The Orthodox church lay in disrepair for many years. In the mid-1990s, former residents of al-Mujaydil founded an organization to work for the renovation of the church and registered it officially with the Israeli government.<sup>136</sup> They fought legal battles but found assistance from an unlikely source: Russian immigrants. Many immigrants to Israel from Russia remained practicing Christians, and they assisted in the fundraising, protection, and renovation of the church and cemetery. Finally in 2004, the church reopened and now holds services in both Arabic and Russian.

As the celebrated Palestinian filmmaker Michel Khleifi has shown in his 1985 film, *Mālūl Tahtaḥfil Bi-damārha (Ma'loul Celebrates its Destruction)*, the former residents of many towns who remained in what is now Israel use this living record to reimagine both the past and the future.<sup>137</sup> Ma'loul, a neighboring town to al-Mujaydil, suffered a similar fate. In the film, Khleifi follows former residents as they picnic in the ruins of the village on Israeli Independence Day, a tradition they practice each year.<sup>138</sup>

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<sup>135</sup> The Arabic language website created by parishioners of this church can be found at: <http://www.dmgm.org/>

<sup>136</sup> For more on this project, see Humphries, I. (2006, Summer-Autumn). Al-Mujaydil Church: the Possibilities of Community Action. *Al-Majdal Quarterly Magazine*. Retrieved from <http://www.badil.org/en/al-majdal/item/1021-al-mujaydil-churchthe-possibilities-of-community-action>

<sup>137</sup> (Khleifi, 1985)

<sup>138</sup> For a literary reading, see (Abu-Manneh, 2006).



The town's church grounds and cemetery were part of a pasture for the new Israeli town, and the church building itself was overrun with cattle. In a powerful sequence, the film follows an older man as he tries to locate the site of his demolished family home and is disoriented by the evergreen trees planted over sixty years ago. He first identifies a nearby small grove of olive trees, then a sabr cactus and carob tree, and finally an almond tree next to an olive tree. "There!" he exclaims, pointing at some stones. "The house was here." Noting that the sabr cactus is still there but has moved over the decades, he carries on to look for a mulberry tree near his former neighbor's home.

## **Chapter 2: Cultivation and the Juridical Order**

A host of recent scholarship has produced novel and illuminating analysis of the Israeli control of the West Bank and Gaza Strip. These analyses, critical of occupation policies and their deleterious effects on Palestinians, have provided insightful insights on the mechanisms of territorial, economic, political, and social control exercised by various Israeli government agencies across time and space since 1967.<sup>139</sup> The authors, in different ways, argue for consideration of the more subtle aspects of the occupation, the ways in which it has produced Palestinians as vulnerable and deficient subjects. While the debate covers both the Gaza Strip and West Bank, this chapter will focus solely on the West Bank given the better availability of research material and sources in that area.

With regard to the question at issue in this dissertation, the question of cultivation, this academic body of work tells us that Palestinians in the West Bank rapidly “developed” their agricultural practices with the influx of Israeli funding, know-how, technology, and access to export markets. Analysis identifies a shift after the first ten years of the occupation, when a more conservative government came into power in 1977 and cut funding for the programs. Authors do acknowledge that Israeli agronomic programs after 1967 sought to transform Palestinian agriculture in ways that made it more dependent on Israel for inputs, supplies, seeds, and know-how, but the thrust of their argument is that the “1979 transition” was meant to rectify a politically untenable policy that supported Palestinian agricultural livelihoods through the modernization

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<sup>139</sup> (Azoulay & Ophir, 2012; Gordon, 2008; Hever, 2010; Makdisi, 2010; Weizman, 2007)

process.<sup>140</sup> In other words, the development programs of the early occupation, inadvertently or not, made Palestinian rural life more profitable and tenable. Therefore, the rise of the conservative Likud government in the late 1970s, combined with economic crisis in Israel, caused them to abandon the munificent agricultural programs. While these extensive development programs are striking, they are not novel to Palestine but rather are better understood as part of a longer process of governmentalized intervention in the sphere of cultivation. Cultivation thus is correctly understood as a site of politics in the 1979 West Bank. However, I will argue next that this fact is part of longer story of the production of an abstract political concept of cultivation. More specifically, I argue that understanding the agricultural programs in the West Bank allows us to understand how readings of representations from earlier interventions were called into the present to provide the warrant for the transformations in the 1970s and 1980s. In other words, this chapter will explore how these programs activated an index of cultivation and legal precedent from an earlier moment. Understanding the relation of those earlier moments in the 1930s to programs decades later help us to ask questions about both periods and more fundamentally, about the way that scholars have been narrating the story of Palestinian-Israeli interaction in the West Bank.

What is the nature of these agricultural programs implemented after 1967?

Beginning *during* the Six Day War in 1967, the Israeli government provided agricultural extension and veterinary services to Palestinian farmers to prevent crop failure and

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<sup>140</sup> Weizman accepts this shift when he claims, “By 1979, when the government realized that the expansion of the Palestinian agrarian economy was counterproductive to its aim of annexing uncultivated lands, it stopped the policy that actively encouraged cultivation altogether.”(Weizman, 2007, p. 120) Also, Gordon makes a similar statement on (Gordon, 2008, p. 75).

disease.<sup>141</sup> This curious moment alone illustrates a deep and enduring scientific interest in the farming and conservation practices of Palestinians over decades. Intense scrutiny of local cropping systems and conservation methods by experts in the Israeli government's agronomic training programs is one of the most active yet understudied dimensions of Israeli administration of the West Bank. The implementation of this knowledge regime resulted in: reduced farm biodiversity; the widespread use of hybrid seeds with their accompanying suite of external inputs, including pesticides and herbicides; the increased reliance on irrigation technology and its assorted piping, pumps, joints and nozzles; and finally, a 300-percent increase in the use of synthetic fertilizers in the first ten years of occupation. The raw materials of the knowledge regime were produced and sold exclusively by the new occupying power. According to a government report from May 1969, after less than two years of occupation, "several hundreds of tons" of seeds were sold at discounted prices to farmers, 400 model plots were started to introduce new methods, and 80 field days were held to showcase new technologies.<sup>142</sup> The government contended that 12,000 farmers attended the field days the first year and 18,000 farmers attended in the second year.<sup>143</sup> The new authorities were also concerned about the spread of plant and animal disease. According to their official reports, the Israeli military culled rodents on a large scale, sprayed hundreds of acres of olive trees with a Mediterranean fruit-fly pesticide, vaccinated 30,000 cattle against foot and mouth disease, and

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<sup>141</sup> (Migdal, 1980, p. 61)

<sup>142</sup> (Ministry of Defence, 1969, p. 10)

<sup>143</sup> (Ministry of Defence, 1969, p. 10)

vaccinated 500,000 chickens against New Castle disease.<sup>144</sup> These immediate efforts were followed by wider agricultural extension and training programs within a few years. A large training center in Ramallah was opened, and more Palestinian agronomists were hired to steer programs as varied as plant protection and animal science.<sup>145</sup> According to official reports, major field days were held each spring and fall, and “hundreds” of smaller field days were held around the West Bank “devoted to cultivation methods, irrigation systems, fertilization, disease, and pest control, etc.”<sup>146</sup> Tours of Israeli farms and training programs were also instituted at local technical schools. As the series of reports released by the Israeli government would have it, the Palestinian areas now administered by the Israeli military in the West Bank enjoyed tremendous growth, prosperity, and modernization of agricultural production thanks in large part to its programs.<sup>147</sup>

Yet for all of their important insights, critical analyses of these programs and documents tend to overlook the workings of cultivation, subtle and overt, itself as a political mode of being. Generally, cultivation and agricultural practice are considered external to the process of governing, mere objects in the implementation of development intervention. For example, Weizman states, “Prior to this system of land grab coming into general practice, the Israeli military government had focused on the improvement and

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<sup>144</sup> (Gordon, 2008; Ministry of Defence, 1969, pp. 10–11)

<sup>145</sup> (Coordinator of Government Operations in the Administered Territories, 1972, pp. 40–41)

<sup>146</sup> (Coordinator of Government Operations in the Administered Territories, 1972, p. 41)

<sup>147</sup> Reports include: (Coordinator of Government Operations in the Administered Territories, 1972; Israel. Misrad ha-bitahon, 1982; *Judea, Samaria and the Gaza District, 1967-1987*, 1987, Ministry of Agriculture, State of Israel, 1970, Ministry of Defence, 1969)

expansion of Palestinian agricultural production.”<sup>148</sup> Hever, whose analysis gives fresh critical analysis of the economic aspects of occupation, said, “Israeli professionals were sent to the occupied territories to ‘modernize’ the Palestinian economy—implementing innovations on irrigation, vaccination of livestock, and land reclamation.”<sup>149</sup> Moreover, Gordon, in a careful exploration of the “bio modes of power,” also notes, “The dire effects of Israel’s controlling apparatus in the economic field were not felt during the first years of occupation because the integration of the labor force into the Israeli economy, as well as several other interventions like planting thousands of trees and introducing improved seeds and new agricultural technologies, managed to compensate for the structural ramifications of the integration and externalization process.”<sup>150</sup> These authors do go on to show that the developmentalist policies of the early occupation were meant not only to create dependency of Palestinians on Israeli government and companies for technology and technical assistance, but also to increase the effectiveness of modes of sovereign power such as tree uprootings, limitations on exports and trade, control of crops and planning, and draconian water restrictions. This is best expressed in Azoulay and Ophir, who argue, “The economic integration that had actually improved living standards in Palestinian society during the first decade of Occupation now enhanced its vulnerability.”<sup>151</sup> These important reflections on shifts in occupation policies, however, belie much older debates that put the question of cultivation as a site of politics into sharper relief.

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<sup>148</sup> (Weizman, 2007, p. 120)

<sup>149</sup> (Hever, 2010, p. 8)

<sup>150</sup> (Gordon, 2008, p. 75)

<sup>151</sup> (Azoulay & Ophir, 2012, p. 65)

The relationship between isolated debates offers two central questions for deliberation. First, what insights does the question of development and self-sufficiency, current in the 1980s, offer to our understanding of the current debate regarding the “1979 turn”? Second, what are the historical antecedents that have produced cultivation as a site of politics for the state?

To explore these questions, let us consider the central point of contention. While this debate covers both the West Bank and Gaza Strip, I will address only the West Bank in this chapter. Gordon argued that, after 1979, Israel began to restrict “an independent Palestinian economy based on industry and sophisticated agriculture” and that “the different forms of control that were utilized in the economic field produced excesses and contradictions that ultimately spurred Palestinian resistance and helped shaped Israel’s policy choices.”<sup>152</sup> Gordon correctly argues that the “prosperity” policies of the early occupation were not only aimed at fostering the “economic utility” of the Palestinians under its control. They were, as he stated, also aimed at “managing the population” (p. 76). However, he leaves the agricultural forms of management underdeveloped. In particular, this formulation gives rise to two central issues. First, cultivation and agriculture are left as self-evident, externalized technologies of the state to be deployed through policy, rather than technologies of measurement (around yields, income, input use and so on) made in the process of encounter itself. Second, the formulation denies the political practice of Palestinian cultivators themselves, a topic discussed in the following chapter. Rather than an external process that was simply deployed as a “disciplinary or

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<sup>152</sup> (Gordon, 2008, p. 75)

bio modes of power,” I suggest that cultivation itself emerged as an object through this encounter of forces. The shift in emphasis that Gordon and others describe provides a useful launching pad precisely to explore the conjuncture of forces both human and otherwise that reveal cultivation not as a tool deployed by state power, but a political concept that emerges out of that encounter.

To explore the political life of cultivation from the perspective of the state, this chapter is divided accordingly along two eras of state sovereign power: (a) the British Mandate (1920-1948) and (b) the State of Israel (1948-today). These two periods share certain commonalities, as well as profound differences. The British Mandate period produced cultivation as a kind of metric for the exercise of all kinds of state power: land reform, rule of law, trade, and coercion. After the establishment of the State of Israel, the state has employed various metrics to understand and validate particular forms of cultivation for its own purposes. Especially in the West Bank, these technologies of measurement became increasingly complex. Namely, as a colonial mandate of the British Empire, governmental modes of power operated differently than in the State of Israel, which was the outcome of decades of disparate Zionist agencies working on the settlement of people, land purchase, and capital investment. The division necessarily organizes the chapter into distinct periods; however, this approach is not without its drawbacks. Primarily, it does not fully account for the “hybrid” period of rule, particularly the fascinating First World War period in Palestine between Ottoman rule and British rule.<sup>153</sup> This is a period I hope to explore in further research. More

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<sup>153</sup> (Tamari, 2006)



substantively to our question of cultivation here, a profound contrast is found in the motivations and effects of technologies of measurement around cultivation. In the case of the British Mandate, these modes of measurement instituted various forms of rule that served their stated aim of assimilation of Jews and Arabs. In the case of the Israeli state, however, consolidation of territorial control undergirded all political work, including the abstract concept of cultivation, which gave warrant to state policies toward that aim.<sup>154</sup>

Both of these eras share certain characteristics. As we have been exploring in the last chapter, in state-based modes of power, cultivation emerges as an index used to justify state territorialization. It is political in the sense that it has always served as a kind of justification for the enactment of technologies of rule on the part of the state, yet abstract because it must be made to appear separate from the processes that produce it. If we accept cultivation as a direct technology of rule, then we accept that it stands apart from and is simply deployed as a tool of state power. However, this chapter argues the opposite: that cultivation emerges from the interactions and processes only partly under its control. The next part of this dissertation deals with cultivation as it emerges as a *concrete political practice*. However, this chapter aims to show the historical connections and genealogy of cultivation. This is not meant as a complete history written in a linear manner. Rather, a genealogy seeks to uncover the ways that past events are summoned and are folded into the present, to renew an abstract concept of cultivation. I show below that the British Mandate and Israeli state periods constantly drew upon legal and scientific precedents from the past in order to justify interventions in the present. This

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<sup>154</sup> (Kimmerling, 1983; Weizman, 2007)

topological approach to the temporality of history underscores the continuous entanglement of the past in (the production of) the present. To be clear: I do not argue that what happened in the 1930s for example, caused what happened after 1967, rather that the policies of 1967 summoned those earlier moments in order to shape the present in a particular way. By attending to that folding of past into a contingent present, I am able to argue in this chapter that cultivation for the state is an abstraction that is constantly remade through interactions of ideas, materials, environmental processes, and politics.

*Interlude: Jordan Valley Agroecology*

As we will see in Chapters 3 and 4, agroecological practices and processes are in excess of both efforts to measure and control them and to reproduce them as deficient. Efforts by the British to produce Jordan and Palestine as places in need of intervention obscured a long and complex history of human engagement with the physical features of the land that binds the two places, namely the Jordan Rift Valley. I would like to pause briefly to discuss the valley, which has consistently been the most frequent object of British and Israeli agricultural development interventions. The valley is the northern extension of the Great Rift Valley, which stretches from East Africa under the Red Sea and Dead Sea and provides the basin for the Jordan River. The biophysical circumstances of the valley, with its location below sea level, fertile soil, heat, water, and sun, earn it a comparison to a giant greenhouse. This greenhouse has been produced over time through powerful geomorphologic processes, but also through painstaking human intervention over centuries.

If one were to dig into the earth with a spade, one would find a clayey, alluvial soil structure with a relatively young profile or AC horizon (Horowitz 2001). The shallow soil profiles, which lack organic matter, are caused by the arid climate and the rapid erosion from seasonal flooding (ibid.). The annual rainfall varies widely, from 59 inches in the north to 15 inches in the south. The Rift Valley presents one of the world's most unique topographical formations, with dramatic elevation changes down to the lowest point on the Earth's surface at approximately 400 meters below sea level.

Moreover, the Jordan River provides sustenance for diverse flora and fauna, and it supported some of the world's first settled human communities. In addition, natural springs that are fed by rainfall from the highlands are located against the rift wall, and many show signs of ancient human use (ibid.). These remains indicate that the valley has been transformed into an agroecological landscape over the many years of human settlement and agricultural practices. People have shaped its waterways, irrigation systems, micro-ecologies, and nutrient cycling systems.<sup>155</sup> The deliberate human management of these relationships has allowed the valley to support crop agriculture, animal husbandry, and habitation over a long span of history and has set the stage for contemporary projects. Yet this long tenure of human management could not be acknowledged by colonial scientists because it would undermine the narrative of modern scientific achievement. It was precisely this lack that mandated the series of interventions planned for the coming years.

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<sup>155</sup> Humans and nonhumans are enrolled or recruited into the constitution of various processes and technical bodies. Following Mitchell (2002), a technical body is "an alloy that must emerge from a process of manufacture whose ingredients are both human and nonhuman, both intentional and not, and in which the intentional or the human is always overrun by the unintended" (p. 43). As Mitchell shows, the mixed nature of processes is necessarily written out of conventional narratives to provide the warrant for "modern" / "rational" intervention.

Scientific research itself (such as disease and pest resistance, irrigation methods, etc.) was forged at the site of encounter with other priorities and circulating knowledge and experts from former British colonies. In contrast to programs implemented upon a given populace, British and American interventions sought quick-impact effects to solidify political influence over a shifting terrain of nationalist sentiment. An intense debate arose from the matter, but it remained confined within a modernist frame.<sup>156</sup> Key national figures sought local control over foreign development schemes rather than fundamental changes in the understanding or need for change itself. In doing so, it is precisely the articulation of difference enacted through practices of agricultural and environmental development projects that makes the science available as we know them today.

Many of these projects rely on a process of delay. For European colonial authorities, it was Arab farmers who had to be taught to “appreciate” the benefits of modern science. The presupposition was small-scale technical projects (departing from ostensibly earlier “political” interventions) until local capacity was properly prepared. Today international patronage is premised on a notion of stopgap measures, which are necessary until a political solution can be found. Moreover, through technologies of measurement and reporting, new spatial relationships are instituted that attempt to transform the relationship between land and people. For example, through the institution of intensive production and irrigation, the state is able to regulate the amount and duration of water flow. Or, as we saw above, through the recognition of problems such as

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<sup>156</sup> (El Shakry, 2007; Samera Esmeir, 2012)

disease outbreaks, objects emerge as being in need of intervention as the warrant for a host of state strategies of rule.

### **SECTION I: ISRAELI STATE**

We come now to one of the most important ways that cultivation is linked to the mechanisms of control over land, namely, the law. The 1948 war caused the expulsion of about 750,000 Palestinian Arabs from Historic Palestine to neighboring countries and produced a major crisis for the Zionist settlement project as to the legal status of the lands owned by displaced Palestinians. This conundrum was expressed by Josef Weitz of the Jewish National Fund, and key settlement leader in the Zionist movement:

“As for the property they have left behind, we are prepared to pay for it, after deducting proper compensation for the damage caused by the Arabs. This money will help the Arab refugees to re-establish themselves wherever they may be, whether in Transjordan, Iraq, Syria or Nablus... Israel has no legal way of appropriating these lands, unless it wishes to follow totalitarian methods, and I do not believe that is possible.”<sup>157</sup>

Here we can clearly see how the law was mobilized to annex land rather than simply absorbing the land. In this way, consolidation of control over land comes to depend on the relationship of the law with cultivation. Fischbach shows how the debate over whether or not to compensate and how to compensate refugees for the lost land produced a host of ancillary problems, namely how to classify the land now under Israeli control.

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<sup>157</sup> Quoted in (Fischbach, 2003, p. 60)

Fischbach argues, "Thus the Israeli attitude toward refugee property quickly was becoming clear: Israel would not return the land (restitution); the refugees' legal title to it was now null and void; and Israel would pay compensation, but only for land actually cultivated and only on a collective basis".<sup>158</sup> Here we can see the development of the state's reliance on the need to legally define land as either cultivated or uncultivated. Fischbach shows that ideas central to the creation of the "Custodian of Absentee Property", the body charged with managing and selling the recently acquired land, was in part inspired from the example of refugee property exchanges between India and Pakistan.<sup>159</sup> Thus we can see that ideas, materials, and funding about cultivation circulated between settler-colonies. However, legal practices also circulated through these interconnections. Cultivation emerged as an index and was codified by law in the form of a new body, the Custodian for Absentee Property, where decisions were made around evaluation of the value of land, whether houses and buildings left behind should be retained or destroyed, and whether a parcel was to be considered abandoned or not. This decision making power for the refugees' agricultural land fell on the newly-formed Ministry of Agriculture.

### *Agricultural aftermath of the Nakba*

The fruit hanging from the trees left behind by Palestinian refugees displaced from Palestine in 1948 posed a major problem for the nascent Israeli state. As Fischbach's

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<sup>158</sup> Quoted in (Fischbach, 2003, p. 87)

<sup>159</sup> (Fischbach, 2003, p. 22)

extensive research into property of Palestinian refugees has shown, the various agricultural agencies and the forming Ministry of Agriculture took the lead to harvest the grain and fruit, restart irrigation pumps, and ultimately claim and resettle Palestinian rural areas.<sup>160</sup> The “Emergency Regulations for the Cultivation of Fallow Land and the Use of Unexploited Water Sources of 5709/1948,” passed in October 1948, allowed the Minister of Agriculture to claim “uncultivated” land, even retroactively. The justification for such measures in the text of the law are quoted here from Fischbach:

The War conditions have resulted in lands being abandoned by their owners and cultivators and left untilled plantations being neglected and water resources remaining unexploited. On the other hand, the interest of the State demands that, without prejudice to the right of ownership of land or other property, agricultural production be maintained and expanded as much as possible and the deterioration of plantations and farm installations prevented. For the attainment of these objects, it is necessary that the Minister of Agriculture should have certain emergency powers, which are conferred upon him by these Regulations.<sup>161</sup>

Through those regulations, Palestinian farmland, now emptied, was brought under the sovereignty of the state and various para-state agencies such as the Jewish National Fund. According to at least one estimate in 1949, this included about 3.9 million acres of “abandoned property,” of which 338,000 acres was deemed “cultivable.”<sup>162</sup> Benefitting tremendously from the influx of cash from the massive annual income of the ensuing

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<sup>160</sup> “Given its central role in the creation of centralized Zionist plans for settlement and agriculture, it was the Agricultural Center and its regional councils that began entertaining applications for permission to cultivate abandoned farms from individual settlements and signing lease agreements with them.”(Fischbach, 2003, p. 13)

<sup>161</sup> (Fischbach, 2003, p. 20)

<sup>162</sup> (Fischbach, 2003, p. 52)

lease of urban properties, agricultural plantations, and other assets, the government poured support into the settlement enterprise. This constituted the first enabling factor for settlement of the land directly from the dispossession of Palestinian farmers.

A second important effect emerged from this windfall of Palestinian farmland. An economic and agricultural crisis had to be averted by stepping in to maintain Palestinian villages and farms. Recognizing and maintaining the well-being of the land opened the door for a host of other interventions, namely using new laws to permanently expropriate refugee land. The cereal and grain areas were quickly leased, under the Israeli state's new nationalized land-tenure laws, to neighboring agricultural colonies, which began converting them to industrialized production. However, in areas such as the abandoned, export-oriented citrus groves or vast olive groves, the "Custodian of Absentee Property" found it difficult to find Jewish immigrants willing to cultivate groves that they viewed as unproductive.<sup>163</sup> In 1948, the Custodian created a committee called the Villages Section to manage the farms left by Palestinians. Owing to a lack of interest in cultivating the massive olive groves now in its possession and the fall harvest bearing down on them, the Villages Section hired 3,000 workers to pick the 1948 harvest. In a cruel twist of fate, the workers hired were mostly Palestinians who were internally displaced within the new state of Israel.<sup>164</sup> This harvest of 6,000 tons of olives was sold for 250,000 pounds sterling, and, during the following harvest of 1949, 5,000 tons was harvested.<sup>165</sup> In 1950, however, a cold year and poor harvest, combined with a lack of interest, caused the

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<sup>163</sup> (Fischbach, 2003, p. 35)

<sup>164</sup> (Fischbach, 2003, p. 35)

<sup>165</sup> (Fischbach, 2003, p. 35)



Custodian to turn more toward the planting of new, more productive groves by the new Jewish immigrants. By 1952, according to Fischbach's impressive research, only a third of evacuated Palestinian olive groves were being cultivated. In the case of the citrus industry, a loan from the U.S. Export-Import Bank provided \$8 million for rehabilitation of citrus groves, and the resulting exports provided a crucial influx of foreign currency into Israel in 1951.<sup>166</sup> A similar fate awaited citrus groves, as well, as the government determined it too costly to rehabilitate them and either abandoned or replanted the former Palestinian groves. Granott, quoted in Fischbach, gives a succinct assessment of the relationship of this regime of agricultural production and knowledge with the process of dispossession of Palestinians:

Settlement operations in the years 1950–52 strengthened the conviction that there could be no return to the old status: The lands vacated by the Arabs during the War of Independence were by this time settled, for the most part cultivated, and governed by a progressive agrarian regime, in harmony with the aspirations of Zionism and the rules of the Jewish National Fund. ... Thus, as a result of a combination of unanticipated factors, it has been possible to implement the great principle of land nationalization proclaimed at the inception of the Zionist Movement, which in the State of Israel is now a reality with every day bringing nearer its complete fulfillment.<sup>167</sup>

In this way, the very methods of making the land productive give warrant to the complex legal maneuvering required to reclassify lands, evacuated of Palestinians, as the exclusive

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<sup>166</sup> (Fischbach, 2003, p. 37)

<sup>167</sup> (Fischbach, 2003, p. 76)

property of Jewish immigrants without allowing the inhabitants to return after the end of the war. It is precisely this “progressive agrarian regime” of capital- and input-intensive production that became the justification for dispossession. This process echoes the British Mandate views of neglect of the land necessitating its rehabilitation and parceling for sale. However, another important point is also documented here. The circumstances of the military defeat, poor harvests and cold weather, ideological stances, and lack of knowledge about olive cultivation, among other things, combined to enable the reorganization of land law to allow expropriation of refugee assets. Rather than an entirely external logic, the politics of cultivation emerged out of this cocktail of processes and events. Next we will see how this regime of analyzing land use was brought to bear on cultivation as the Israeli state was established. I use English-language sources that illustrate the representational space produced in English for outside audiences.

### *Producing a Palestinian Green Revolution*

As the Israeli state established sovereignty over the land and settled it, the Galilee, where the bulk of the minority of Palestinians who remained within Israel lived, was put under martial law from 1948 until 1966. In fact, now for the first time, the Zionist movement attempted to improve Palestinian agriculture directly through development intervention. The first agricultural extension projects aimed directly at Palestinian farmers who had become citizens of Israel came under the auspices of the military government in the Galilee region in 1960. The first agricultural extension was taken up in 1954, and the first

extension office<sup>168</sup>, purposed to serve Palestinian Arabs in the new state of Israel, opened in Nazareth in 1961.<sup>169</sup> Its work in the early days was “devoted to the liaison between farmers and the Military Government.”<sup>170</sup> The Israeli ministry created a Section for the Arab Village within the Ministry of Agriculture, which was staffed by Jewish agricultural specialists with “earlier contacts with Arab villages” and two Arab assistants. This department soon grew with extension agents as some Palestinians graduated with technical degrees from Israeli universities. Intensive agricultural extension was thought to be the most effective means of bringing about changes in Palestinian agricultural practices, where British policies had failed to produce extensive changes.<sup>171</sup> According to Blum, “The evidence published so far indicates that agricultural extension was probably the single most important factor in explaining the quick and intensive development of agriculture in the Arab sector of Israel.”<sup>172</sup>

It is important to note that although these extension policies are almost always analyzed in isolation of Israel proper, the process of intervention echoes that of the Palestinian agricultural areas before and after the establishment of Israel. Massive investment in mechanization, irrigation, chemical inputs, and farm credit resulted in major shifts for “1948 Palestinian” farmers beginning in the 1950s with the establishment of Israel. As an example of this ostensible progress, the land area of irrigated production increased fivefold in the first eleven years of the new state. The attitude of researchers

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<sup>168</sup> (Itzhak Arnon & Raviv, 1980)

<sup>169</sup> (Blum, 1988, p. 306)

<sup>170</sup> (Blum, 1988, p. 302)

<sup>171</sup> (Itzhak Arnon & Raviv, 1980)

<sup>172</sup> (Blum, 1988, p. 300)

toward the changes was clear. In describing the area of Taibe and Tira in the Eastern coastal plain, they stated, “Formerly this was one of the most desolate and backward places in Palestine.”<sup>173</sup> After Israeli government investment and intervention, they put it like this, “At present the Little Triangle is one of the most advanced agricultural areas in Israel.”<sup>174</sup> These statements illustrate the emergence of an explicit agricultural development discourse – in not just in Israel-Palestine, but in many parts of the world – that dramatically reconfigured relations with Palestinian cultivators.

In what concrete ways did cultivation emerge as an index to enable interventions? Let me offer two examples. First, studies were carried out at the new Nazareth agricultural extension office for “identification of problems and professional issues in the region and to set priorities.”<sup>175</sup> These studies immediately set about following the example of British administrators from only twenty years before, prioritizing water distribution for use in intensively irrigated production of horticultural crops. Second, they implemented a number of research plots to complement existing breeding programs. More specifically, research plots gathered data on resistance to pests, disease, and drought, as well as on responses of particular research varieties to microclimatic conditions. With this data, the Israeli Ministry of Agriculture and, by extension, agro-industry was able to extend valuable research data into new areas of rain-fed production and new genetic pools in plant and animal breeding.

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<sup>173</sup> (Itzhak Arnon & Raviv, 1980)

<sup>174</sup> (Itzhak Arnon & Raviv, 1980)

<sup>175</sup> (Blum, 1988, p. 305)

However, the Israeli government specialists in Arab agriculture needed an extensive study to illustrate how the “green revolution” in Arab agriculture was made possible. The results of extensive studies of changes in Arab agriculture were then published and offered in both academic and practitioner arenas of agricultural development work.

After a preliminary study in 1971, agronomists and rural sociologists working for the Settlement Ministry and Ministry of Agriculture surveyed “the 94 Arab villages of Israel” in order to conduct an in-depth study in the following years. Published in Hebrew in 1976 by Itzhak Arnon, Michael Raviv, and Sara Molho, the study was abridged and published in English as “Fallaḥ to Farmer” in 1980.<sup>176</sup> To conduct the study, the authors used questionnaires and interviews given by “educated Arabs” with 388 farmers and 273 nonfarmers in nine villages in both Israel proper and the West Bank beginning in 1973. The impetus for the study stemmed from what they deemed to be dramatic changes in the West Bank and Israel in Arab villages under Israeli rule. The authors asked:

What has triggered this sudden and dramatic change after such a prolonged period of stability, with stagnation, especially in view of the lack of change in agriculture in most of the Mediterranean region in general, and, recently, of the neighboring West Bank of the Jordan, in particular?

The researchers aimed to understand what Israeli interventions enabled Palestinian agriculture to finally ‘improve’ after centuries of stagnation “since biblical times”.<sup>176</sup> One of the most common themes, repeated in the introductions of numerous studies, described

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<sup>176</sup> (Itzhak Arnon & Raviv, 1980)

the “unchanging” character of Palestinian cultivation practices.<sup>177</sup> Establishing, through studies, reports, and surveys, the “unchanging” character of Palestinian cultivation practices allowed Israeli interventions to be set in sharp relief. In the preface to one of his popular textbooks, Itzhak Arnon stated, “The Author has been active in agricultural research for over four decades in a country that, during this period, has passed through all the stages of development from biblical agriculture to that of the twentieth century.”<sup>178</sup> Arnon’s claim, common among Western scientists studying local cultivation, was that this stagnation, neglect, and stasis meant that changes brought in the nineteenth and twentieth centuries marked a period of change for the first time in more than 2,000 years.<sup>179</sup> Thus, these changes had to be precisely documented. They were partly motivated in these studies to share these results of the “green revolution” in Arab agriculture as a model for other developing countries.

Yitzhak Arnon was active on this front. Born in 1909 and raised in Belgium, Arnon studied agronomy at the renowned Faculté Universitaire des Sciences Agronomiques de Gembloux, a center of agronomic science at the apex of Belgian colonialism in central Africa. The institute in the late 1920s and early 1930s was heavily involved in establishing agronomic studies to support the notoriously exploitative rubber plantations of the Belgian Congo and the establishment and staffing of the massive research center, the Institut National pour l’Etude Agronomique du Congo Belge

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<sup>177</sup> (A. Aaronsohn, 1910b; Itzhak Arnon & Raviv, 1980; I Elazari-Volcani, 1930)

<sup>178</sup> (I. Arnon, 1981, p. xvi)

<sup>179</sup> (I. Arnon, 1989, p. 1)

(INEAC), in 1933.<sup>180</sup> In his writings, Arnon gave the INEAC as an example of colonial agricultural institutions, calling it “an enormous research complex in Yangambe—probably the biggest in the World—with experiment stations in all parts of the country.”<sup>181</sup> Though it is not known whether he traveled to Belgian colonies, his extensive training in agricultural science, derived from Belgium’s colonial experience, probably traveled with him to Palestine. Arnon arrived in 1932 and began work with the Department of Agriculture of the British Mandate, eventually becoming Superintendent of Research at the largest station near Acre (‘Akka).<sup>182</sup> A doctorate from the Hebrew University took Arnon to the directorship of the newly formed Volcani Institute for Agricultural Research in Rehovot, which brought together academic, Jewish Agency, and British Mandate agricultural research and experimentation agencies under one umbrella. Arnon served as director from 1958 to 1968 and continued as professor of agronomy at the Hebrew University.

The emergence of something of an “agricultural development” industry from Israeli experts bears discussion. Abraham Blum, a leading authority on agricultural extension theory and an Israeli scholar, declared emphatically that, lacking other options, “Professionally, they [the Nazareth office] continued in the line started by the British.” An early leading Israeli agronomist, director of the national agricultural research center, and agricultural development consultant worldwide, Arnon made a similar observation: “After independence, the State of Israel inherited the dual frameworks of agricultural

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<sup>180</sup> (“Expo Congo,” n.d.)

<sup>181</sup> (I. Arnon, 1989, p. 210)

<sup>182</sup> (El-Eini, 2006, p. 183)

research and experimentation of the Jewish Agency and of the Mandatory Government.”<sup>183</sup>

Blum and, to a greater extent, Arnon were passionate advocates for the implementation of modern agricultural extension services in developing countries. Arnon’s 800-page opus, “Agricultural Research and Technology Transfer,” in 1989 was an important intervention into this field of agricultural development in Third World countries.<sup>184</sup> Even more important were the two editions of his textbook and guide, titled the “Modernization of Agriculture in Developing Countries.”<sup>185</sup> After his tenure as director of the Volcani Institute for Agricultural Research, he continued as a prominent academic and sought-after agricultural consultant in Asia, Africa, and Latin America. He described trips to Mexico and Kenya, among many other locations, with his work with the Food and Agriculture Organization (FAO) of the United Nations.

Yet, in his extensive textbooks and writings, Arnon drew from the well of experience gained as we saw above ushering Palestine through “all the stages of development from biblical agriculture to that of the twentieth century.” He frequently drew examples from Arab cultivation methods to support his claims. His study of Palestinian cultivation, “Fallaḥ to Farmer,” delineated the change that was possible in Palestinian villages brought into modernity by Israeli agricultural intervention.

Let us return now to the ways by which forms of measurement of production—soil fertility, economic status, yield, and so on—were brought to bear upon Palestinian

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<sup>183</sup> (I. Arnon, 1989, p. 82)

<sup>184</sup> (I. Arnon, 1989)

<sup>185</sup> (I. Arnon, 1981)



cultivation practices. How were these studies able to distance themselves from wider political-ecological processes? One example from the work of Blum will suffice. The fastidious attention to forms of Palestinian agricultural deficiency allowed these academic authors to stand apart from the processes of occupation, dispossession, legal orders, and biology that made their agronomic work possible. In an article comparing strategies and effects of Israeli government extension services in the Gaza Strip and Nazareth in 1989, Blum makes no mention of either dispossession of land or the extension of agricultural services via special military government either in Nazareth or the Gaza Strip. In fact, after describing the ineffectiveness of British Mandate agricultural programs, he states, “The major breakthrough came to the Nazareth region after the establishment of the State of Israel, and after the establishment of a regional extension bureau in Nazareth, soon after Extension Service was set up in the Israeli Ministry of Agriculture, in 1960.”<sup>186</sup> This ahistorical scholarly stance, in which a number of interactions are marginalized, began to frame discussion about the agricultural policies of the Israeli occupation of the West Bank beginning in 1967.

#### *Extending the Arab Green Revolution after 1967*

In a striking echo of Israeli government reports, produced in English for an outside audience, describing the imperative to maintain and prevent the deterioration of

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<sup>186</sup> (Blum, 1989, p. 314)

agricultural production of Palestinian refugee lands in 1948, government reports again in 1967 made a strikingly similar appeal.

On June 11, Eytan Israeli, at that time still on Army duty, was appointed Agricultural Officer for the Nablus district. He also realized that speedy action was essential. The cattle herds of Kalkiliya, dying slowly from lack of care, were his first concern. His second was to look after the wells and prevent their blockage or fouling. The citrus groves, turning yellow for want of irrigation, had to be tended. Swift and far-reaching measures were needed if grave, possibly irreparable, damage was to be avoided.<sup>187</sup>

The first task of military commanders during the war itself was to “contact the staff of the local offices of the Jordanian Ministry of Agriculture” to restart the process, encourage staff to remain in their positions, and prevent an economic collapse.<sup>188</sup> So as to leave no doubt in the reader’s mind as to who was in charge, the first report on the programs of the Israeli occupation in 1969 noted that all branch ministry staff (agriculture, health, etc.) were “completely subordinated to their commanders as Army officers.”<sup>189</sup> As we saw in the Galilee in 1948, this organization continued for decades of military rule. When the Israeli government occupied the West Bank in 1967, it followed in a long tradition of modern agricultural development programming first implemented in the British Mandate period. The British government established agricultural experiment stations, extension services, school curricula, and synthetic fertilizer regimes. Many of these programs were

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<sup>187</sup> (Ministry of Agriculture, State of Israel, 1970)

<sup>188</sup> (Ministry of Agriculture, State of Israel, 1970)

<sup>189</sup> (Ministry of Defence, 1969, p. 3)

continued under Jordanian government control until 1967, when the newly occupying Israeli government expanded agricultural development projects. However, Israeli aims for the land were focused on building settlements. As we have seen above, it directly deployed its experience in agricultural development work in Palestinian villages inside Israel in working on its new subjects in the West Bank and Gaza.

One of the most revealing discourses emerged in the publicity material published by the Israeli Ministry of Foreign Affairs in 1970 and 1983.<sup>190</sup> Two related themes can be identified. First, agricultural development will foster “peaceful cooperation” between Palestinians and Israelis. Second, that development is contingent on the modernization of agriculture with “contemporary farming methods.” Thus, we can see in the report from 1970 that:

Speedy action by the Ministry of Agriculture has thus prevented crisis and upheaval in the most important branch of the economy of Judaea and Samaria. It may be assumed that, from the agricultural point of view, conditions will never go back to what they were and, moreover, the great forward stride in farming will, it is hoped, be a stepping-stone to mutual understanding and blaze the welcome trail to peaceful cooperation.<sup>191</sup>

This view is also reflected in a Ministry of Foreign Affairs briefing from 1983 titled, *The Green Revolution in Judea-Samaria: 15 Years of Israeli-Arab Cooperation*. The authors argue that it is precisely the technology that has enabled the hope of cooperation:

One of the first objectives of Israel’s administration was to introduce

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<sup>190</sup> (Israel & Misrad ha-huts., 1983; Ministry of Agriculture, State of Israel, 1970)

<sup>191</sup> (Ministry of Agriculture, State of Israel, 1970)

contemporary farming methods through agricultural extension services, including the improvement of crops under irrigation with more modern methods, and the replacement of low-yield with high-yield strains, and low-income with high-income crops. No less important, however, has been the introduction of Israeli agricultural know-how via Arabs of Judea-Samaria who have been working in the agricultural sector in Israel, whose experience has spurred them to innovation on their own farms, through adaptation of new technologies to local conditions, resulting in significant yield increases.<sup>192</sup>

What logic was at work here? Was Israel simply acting to consolidate its economic interests, or were other forces at work? In addition to the debate discussed at the beginning of this chapter, an intense debate amongst Palestinian scholars from the 1980s on the economic effects of the Israeli occupation has largely been absent from the current debate on the Israeli occupation.<sup>193</sup> The debate began formally with a conference in Jerusalem in 1981 titled Development For Steadfastness [*At-Tanmia Min Ajl As-Şumud*] and continued into the early 1990s with debates around strategies of resistance and the First Intifada, or uprising, from 1987 to 1991.<sup>194</sup> Leading figures in debates particularly related to agriculture included Ibrahim Dakkak, Hisham Awartani, Salim Tamari, and Raja Khalidi. This prolific political economic literature offers important insights into the very recent analysis of the Israeli occupation, especially with regard to agriculture. These works do acknowledge what Dakkak called the “dominance of the occupation

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<sup>192</sup> (Israel & Misrad ha-huts., 1983, p. 1)

<sup>193</sup> (Gordon, 2008) does, however, make use of Tamari’s work, especially (Tamari, 1981)

<sup>194</sup> (H. Awartani, 1982; Hisham Awartani, 1988; Barghouti, 1986; Dakkak, 1981; Tamari, 1981, 1991)

agricultural policies” that “caused everyone to change local agricultural practices”<sup>195</sup> and also recognized improvements in the standard of living of Palestinian rural families.<sup>196</sup> However, one branch of this debate was much more cautious about effects of the agricultural policies of the early occupation, citing the massive dependence on Israeli technology and inputs and calling for policies of “resistance sumud” that included greater agricultural self-sufficiency.<sup>197</sup> This form of sumud or steadfastness, as Tamari points out, was sharply contrasted to the way it had become “a term of cynical self-denigration” in reference to those Palestinians who benefitted from the “sumud” funds flowing in from Arab countries during the 1970s.<sup>198</sup> While the home economy and agricultural self-sufficiency movements were criticized as being inattentive to local economic changes, many of those concepts were taken up in favorable ways into the popular committees that formed a power base for the uprising that began in 1987.<sup>199</sup>

Yet the story is more complex than in the telling of critical Palestinian scholars. At first many farmers refused to use the hybrid seeds or fertilizers and actively organized against them. Already by August 1967, the first field demonstration day was held in Hebron, and an Israeli report noted that, “Two days before opening, extremist circles warned the farmers not to attend, but the intimidation was ignored and thousands of Arab agriculturalists visited the grounds and watched demonstrations of the use of farm

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<sup>195</sup> (Dakkak, 1981)

<sup>196</sup> (Abed, 1988)

<sup>197</sup> (Dakkak, 1981)

<sup>198</sup> (Tamari, 1991, p. 63)

<sup>199</sup> (Barghouti, 1986; Tamari, 1991)

machinery, ploughing methods and effective spraying against pests.”<sup>200</sup> This was not the first time that the Zionist movement had attempted to create local organizations amenable to their agricultural interests. The Zionist Executive created the *Hizb Az-Zurra*’ (Farmer’s Party) in 1924 to assist in the modernization of Palestinian agriculture. It collapsed by 1927 after nationalist groups revealed its relationship in working with the Zionist movement<sup>201</sup>. Again in the 1978, the Israeli government established the so-called Village Leagues in rural areas to counter the growing discontent, attempting to pit rural groups against urban political leaders.<sup>202</sup> This effort also had largely failed by 1983 and was disbanded by the outbreak of the first uprising in 1987.

As we saw above during the British Mandate period, the Israeli interventions changed as they were constantly beset by disease outbreaks and droughts. For example, the government blamed sheep imported from Jordan for the spread of animal disease and halted all imports, which inflated the cost of meat. The government attempted to solve the problem by importing “tens of thousands” of heads of sheep through Israeli ports from Romania to fill the void.<sup>203</sup> In retaliation, the Jordanian government stopped all agricultural imports from the West Bank, and a bumper crop of Hebron grapes in particular was nearly doomed until the Israeli government itself arranged to purchase the grapes to avoid a market crash. The wheat crop in those years also suffered from a drought, and the farmers were made more vulnerable by their recent intensification of production and concentration on cash crops. In response, the Israeli authorities introduced

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<sup>200</sup> (Ministry of Agriculture, State of Israel, 1970)

<sup>201</sup> (Aruri, 1989, p. 604; Porath, 1974; Sufian, 2007, p. 315; Tamari, 1983)

<sup>202</sup> (Tamari, 1983)

<sup>203</sup> (Coordinator of Government Operations in the Administered Territories, 1972, p. 39)

new strains of wheat developed by Israeli companies, ending their reliance on the “production of their own seeds, which are often poor in quality.”<sup>204</sup> In this way, the subtle shifts in production methods, chemical inputs, climatic fluctuations, economic interests, and seed production began to transform the landscape of cultivation in Palestine. We have seen now the situation of cultivation in the West Bank and Gaza in a new light. Next, I will explore the British Mandate period and the way that those agricultural policies enable enabled the changes discussed in the previous section. More specifically, I show how the index of cultivation codified during the Mandate period came to supply warrant for the appropriation of land.

## **SECTION II: BRITISH MANDATE**

This section charts the connections between people and environments that colonial scientific authorities sought to reorder in the 1930s and 1940s. Efforts to “improve” Palestinian cultivation derive their warrant from the conceptual foundations laid during the colonial period. This does not discount, however, the role of the Ottoman Empire, especially in the work of land reform during the Tanzimat period and the series of reforms that culminated with the Land Code of 1858.<sup>205</sup> However, this period currently lies outside the scope of my study for practical considerations. The transition years and traces of the Ottoman period in Mandate policies are important to better understand the import of colonial policies. This period’s centrality is also evidenced by the growth of

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<sup>204</sup> (Coordinator of Government Operations in the Administered Territories, 1972, p. 41; Kurzom, 1997)

<sup>205</sup> (Fakher Eldin, 2008; Mundy, 2007)

recent work in this regard.<sup>206</sup> I focus here on the ways that cultivation came to be measured under British Mandate authorities, with particular attention to how those metrics gave warrant to interventions that followed.

First, agricultural scientists and other experts have long sought through modern science to establish links between the status of the land and a corresponding social order of the people inhabiting it. The categorization in the service of state power was made possible through mechanisms such as the implementation of agricultural science by Western powers. In their relatively short tenure from 1920 to 1948, British colonial authorities conducted agricultural surveys and studies in Jordan and Palestine. Scientists commented widely on soil fertility and structure, erosion patterns, livestock breeds, common pests, water resources, and plant diseases, and they planned interventions accordingly.<sup>207</sup>

However, contingencies such as disease constantly changed the course of policies. For example, schemes for the development of poultry in the country meant that breeding for new hybrid races of poultry was concentrated in one location, at the Acre (‘Akka) research station of the British Mandate. As El-Eini shows, agriculture officials claimed that 99 percent of the “modern” poultry production in the country originated with chickens from the research station.<sup>208</sup> However, the intensified production of eggs and layers of new breeds of chickens in close quarters caused a massive outbreak of avian

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<sup>206</sup> (Tamari, 2006)

<sup>207</sup> (El-Eini, 2006)

<sup>208</sup> (El-Eini, 2006, p. 141)



influenza that then infected the local village stock in 1945.<sup>209</sup> Both of the main hatcheries and the program overall were abandoned as a result, and more decentralized models of production were explored. Another instance occurred with the ‘*Al-Dudeh*’ wheat leaf miner (*Syringopais temperatella* (L.)) outbreaks in 1931, 1933, 1935, and 1937 and led to widespread damage to cereal crops such as wheat.<sup>210</sup> British agricultural authorities wanted to impose harsh legislative actions but, fearing local reaction, instead set up forty-six demonstration plots to encourage farmers to introduce a third crop into the rotation. As El-Eini carefully shows, when these efforts failed due both to widespread resistance to a third crop rotation (because of livestock grazing on crops) and spread of the pest, they passed harsh restrictions on the planting of a winter rotation in 1945 and asked local village leaders to guarantee the change in rotations.<sup>211</sup> Next, I want to discuss three of the most important interactions we can credit with producing an abstract notion of cultivation under the British Mandate.

First, the British Mandate used cultivation as a kind of index to pioneer various forms of intervention. This “intervention impulse” emerged through the processes of research, documentation, and experimentation on Arab agriculture. Sir Robert Peel presided over the Palestine Royal Commission, whose full report was published in 1937. The report’s authors grappled with measuring and counting cultivable land and mediating between Arabs and Jews to ensure the stability of the British Mandate. An important theme emerges in the Peel Commission Report: British authorities were intensely

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<sup>209</sup> (El-Eini, 2006, p. 141)

<sup>210</sup> (El-Eini, 2006, p. 143)

<sup>211</sup> (El-Eini, 2006, p. 143)

interested in reforming Palestinian agriculture to pacify the area, a responsibility they acknowledged would take a long time because of the “separation of centuries” between Zionist and Palestinian knowledge and resources.<sup>212</sup> This impulse could be read today as a part of a larger British colonial impulse in its desire to recognize and subsequently also re-organize Palestinian agricultural life. This recognition is a crucial element of the subsequent interventions as it stabilizes and circumscribes an object to be acted upon.

However formidable the task, colonial authorities felt compelled to undertake reform. British colonial texts express a deep concern for what they saw as the sorry state of the Palestinian *fallah*, . More importantly, they express a commitment to help. This is popularly known as the civilizing mission of colonialism. The report of John Hope Simpson in 1930 on the state of the land is exemplary: “The fallah is neither lazy or unintelligent. He is a competent and capable agriculturalist, and there is little doubt that were he to be given the chance of learning better methods, and the capital, he would rapidly improve his position.”<sup>213</sup> In this narrative, Arab peasants are in fact the obstacle to their own development and progress. If the peasant were taught to value modern ways, then herhis development would enable peace between Zionists and Palestinians. This is stated explicitly in the Agriculture section of the Peel Commission report:

We have referred in paragraph 7 of Chapter III to the “the separation, almost, it might seem, by centuries,” of the Arab and the Jew. These two visits to the Arab village and the Jewish laboratory illustrate its meaning. *Yet, when the villager is sufficiently educated to appreciate the value of the discoveries of the laboratory,*

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<sup>212</sup> (Great Britain. Palestine Royal Commission., 1937, p. 271)

<sup>213</sup> (Hope Simpson, Great Britain, & Colonial Office, 1930, p. 66)

*the hoped-for assimilation of the races may begin.* The idea still prevails in some quarters that Palestine is a fertile country, “a land of milk and honey,” whereas, for ten months out of the twelve it is in fact for the most part dry and barren. Crops can only be obtained by hard toil. Modern science may promote fertility. Whether in relieving the Arab peasant of his indebtedness by Co-operative Societies and Agricultural Banks, or in persuading him to irrigate his lands or to plant fruit trees, several decades must pass before any marked change will be apparent. [Emphasis added]<sup>214</sup>

For Peel and his fellow committee members, Palestinian farmers had to be taught to appreciate modern reason. By this logic, the more advanced party must undertake this task on behalf of the less advanced. Moreover, this long-term effort is the overwhelming responsibility of the colonial power. British colonial authorities believed that education of Arabs would lead to agricultural development and help them to have a “fair chance to improve their lives.”<sup>215</sup> Education of Palestinians in modern agriculture enables them to overcome their own obstacles to development.

This was also a very common theme of Zionist agencies: that modern agricultural methods that they introduced to the area would benefit Palestinians as well. But they also made clear, as El-Eini argued, that, “the Jews wanted Government development policy to support the intensification of Arab agriculture, thereby releasing land for their settlement. They also argued that Jewish settlement influenced Arab agricultural development.”<sup>216</sup> A

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<sup>214</sup> (Great Britain, Palestine Royal Commission., 1937, p. 271)

<sup>215</sup> (Hope Simpson et al., 1930, p. 79)

<sup>216</sup> (El-Eini, 2006, p. 119)

similar sentiment was found in the British reports, though they did also express frustration with the Zionist narrative of “progress by transfer” of modern technology to the neighboring Arab farmers: “Unless he can be provided with the same resources, in the shape of capital, continuous help and advice, he cannot possibly compete with the Jew.”<sup>217</sup> In this way, British and Zionist interests found common cause in the documentation of deficiencies and potential interventions on Palestinian cultivation practices.

Second, the establishment of particular notions about the hostility inherent to the primitive nature of both people and environments was established through regimes of measurement, especially the geomorphological status of the land. Mandate and collaborating Zionist and American scientific experts measured the mismanagement of the land and the attendant need for reform of the landscape itself. In contrast to modern agriculture, the “uncontrolled” and “unruly” nature of Arab people is evident in the rampant erosion, desertification, and lack of vegetation, all of which can be measured scientifically. Such markers serve to index the “backwardness” of the fallah. The preoccupation with internal and external “nature” as threat is clear in contemporary texts. By their framing, both nonhuman nature (e.g. biophysical circumstances, desertification, and poor nutrient cycling), as well as human nature (e.g. Palestinian immaturity and unreason), encode a constant threat of violence. This deficiency in Palestinian human nature is reflected in “nature” on the ground. Thus, when Jewish and British colonial

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<sup>217</sup> (Great Britain. Palestine Royal Commission., 1937, p. 269)

authorities deployed modern science to categorize and evaluate soil fertility and structure, hydrological resources, and productivity, these experiments served to naturalize a social order built on a hierarchy of peoples.

Few expressed these ideas more widely and energetically than W. C. Lowdermilk, an American soil scientist who conducted a survey of Palestine in 1938-9 at the request of the U.S. Soil Conservation Service. Lowdermilk's argument was straightforward but carried numerous assumptions: The biophysical state of the land is related to the abilities and status of its associated inhabitants. Lowdermilk (1944) saw hope for the land of Palestine in the modern European agricultural settlements. In the "neglect" of the land, he diagnosed a problem with the Palestinian inhabitants: "Backward native populations and political and social decay are the usual result when land is impoverished by erosion and neglect. Palestine is a classic example of such transformation" (p. 21). In this telling, the deficiency of human nature is reflected in the barrenness of the land, a mark of the backwardness requiring colonial tutelage. The conflation of these natures immediately sets those people endowed with reason apart from those who remain connected to "nature." Accounts such as Lowdermilk's allowed Israel to ally itself on the side of reason and progress:

The country is emerging from a backward low-yield agricultural economy, dependent chiefly on grains and olives, and is evolving towards a modern, scientifically directed and richly diversified economy where fruits, vegetables, poultry, and dairy products play an ever greater role. The wooden plow is yielding to the tractor, the flail to the threshing machine.

Rural Palestine is becoming less and less like Trans-Jordan, Syria, and Iraq and more like Denmark, Holland, and parts of the United States.

(Lowdermilk 1944, p. 6)

For Lowdermilk, it is precisely in the study of agricultural practices and conservation efforts that a racial order is laid bare. This binds the territorial to the social and uniquely enables the scientist to enjoin changes.

Third, the British Mandate agricultural officials and Zionist scientists shared an antipathy for the *mushá* system of commonly held land, which was rooted in the Ottoman agricultural policies of the Tanzimat period. The Peel Commission report regarded the two-year cultivation cycle of land held in common to be “an obvious bar to any agricultural development.”<sup>218</sup> This was because, according to the experts commissioned in 1923 to study the *mushá* system and possibilities for dismantling it, it offered no economic incentive for farmers to improve the land, much less even maintain it. The studies and intensive efforts of the Mandate authorities focused on measuring the economic viability of small-scale agricultural holdings. They considered abolishing the system outright by law, but found that “in certain areas, the Arabs regard this system of tenancy, destructive as it is of all development, as a safeguard against alienation.”<sup>219</sup> However, in more subtle ways, through the operations of agricultural extension, they began to dismantle the system. The report explicitly notes: “Government have a number of officers who are constantly touring the villages, placing expert assistance and guidance

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<sup>218</sup> (Great Britain. Palestine Royal Commission., 1937, p. 219)

<sup>219</sup> (Great Britain. Palestine Royal Commission., 1937, p. 219)

at the disposal of the cultivators as to the best method of breaking up mushá.”<sup>220</sup> British officials used geomorphological measurements of soil erosion and soil tests to illustrate that development of agriculture required the parceling of land. It was a consistent position across all of the major British studies of Palestine, according to El-Eini: “Criticisms of its being an obstacle to agricultural development and calls for its abolishment were repeated in the Hope-Simpson, Johnson-Crosbie, Strickland, and French Reports (as discussed above); all the arguments of which were repeated in the Colonial Office by H.F. Downie, who saw land partition as a means to improve Arab agriculture.”<sup>221</sup> This was an economic argument that played into both the economic goals of the British authorities and also the wider goal of facilitating privatization of land, ostensibly in the interest of the welfare of Palestinian farmers. However, as noted in the report above, the parceling of land enabled its enrollment into the system of trade and sale that was an aide to the Zionist movement’s land-acquisition plans.<sup>222</sup> It was sometimes expressed explicitly but often again highlighted the mushá system’s restriction of development for the Palestinian farmers as measured in the soil fertility and economic well-being.<sup>223</sup>

Similarly, the interventionist impulse of agricultural science is revealed in the justifications brought for British irrigation projects in Jordan. This was premised on the notion that current production would not be able to sustain population growth or the influx of Palestinian refugees from across the river. To rearrange those agricultural methods was to assume the humanization process of Jordanian farmers through

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<sup>220</sup> (Great Britain. Palestine Royal Commission., 1937, p. 219)

<sup>221</sup> (El-Eini, 2006, p. 296)

<sup>222</sup> (El-Eini, 2006, p. 296)

<sup>223</sup> (El-Eini, 2006, p. 296)

mechanization and juridical measures. It was during the British Mandate period in Jordan (known then as Transjordan) that authorities first sought to improve the situation of rural peasants and herders by bringing high-tech irrigation technology to the country and, in doing so, constitute science itself as the intervening force.

### SECTION III. CONCLUSION

Until now, the scholarly literature has explained the situation of Palestinian agriculture in the West Bank in the following terms: Israel improved Palestinian agriculture by modernizing it, subsidizing it, and allowing export, and then it cut this generous aid when it realized it was working against its goals of dispossession. As we saw, another debate prevalent among Palestinians in the late 1980s sought to understand whether the Israeli occupation was creating “dependence” or “integration” through its policies, attempting to understand the underlying motivations for its policies. One is left with the impression that the West Bank experienced a *natural* unfolding of agricultural modernization, though it may have been affected by factors out of its control such as politics or diseases.

However, both of these positions assume an actor-peasant who is the passive object of development intervention simply calculating his options within a suite of options provided by the occupier’s policies. An understanding, in contrast, that explores how a particular situation emerges *through* a series of arrangements and practices over which humans only retain partial control gives another account. This addresses Tamari’s consistent critique of traditionalist positions because, in contrast to nativist stabilization of a static, idealized peasant past, attention to the dynamic process of political practice



through the practices of cultivation reveals how those positions are not necessarily preordained or understood through conventional economic and political logics from the perspective of the state.<sup>224</sup> They do not seek to stabilize an idealized past through regimes of representation, but constantly emerge through a complex of practices and situations that remake the political horizon.

At base, I have argued that the situation of Palestinian agriculture is contingent and situated.<sup>225</sup> It is not the product of a predetermined rollout of policies that had accordant effects on the ground. Israeli policies do not occur on a flat, receptive surface. Rather, the policies themselves emerge through the encounter of ideas, practices, and ecological circumstances, among other things. To grant that Israeli policy simply “transformed” and “modernized” Palestinian agriculture through a process of incentives leaves unquestioned the host of connections, ruptures, and violence that were its conditions of possibility. The traces of the British and post-1948 Israeli period discussed above come to have meaning in new ways in 1967 and 1979 and beyond as they are invoked to produce the understanding of the present.

What then explains the shift in Israeli policies in the West Bank after 1979? To explore that question, we must consider a number of factors and processes at work during that time. At its core, the goal of enrolling tracts of land into state projects of various kinds (settlements, roads, etc.) remained largely the same before and after 1979. The shift emerged because the emphasis for ruling the West Bank shifted from encouragement to coercion and law, although those processes had always been interrelated. However, our

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<sup>224</sup> (Tamari, 1991, 2004)

<sup>225</sup> (Gidwani, 2008a, pp. 1–32)

thinking about that shift has remained static. Analysis of this shift in emphasis has not been able to explore this process because it has been unwilling to explore the technics of cultivation in the West Bank. Why? Because considering those processes, interactions, and arrangements that make cultivation possible as we know it would unsettle professionalized knowledge about agricultural and environmental processes as the sole locus of authority. By leaving it unattended, it constantly reproduces the regimes of difference instituted through Zionist and British scientific exploration that we explored in the previous chapter. Such oversights obscure the connections and coercion that make possible the dominant understanding of cultivation as sector of the economy or subject of scientific inquiry.

Over the last two chapters, we have seen that the various technologies of measurement have produced an absolute separation between “traditional” and “modern” agriculture. This is what I have termed a *politics of representation*. The traditionalist view participates by policing the boundary between the “traditional” and “modern” forms of agriculture and thus constantly reproducing its effect rather than unsettling the boundary. Thinking of cultivation as practice, in contrast, allows us to understand how the distinction is remade through its interaction with a host of forces human, political, and otherwise. Thus, neither standard political-economic nor traditionalist accounts of cultivation in Palestine can help us explain the shifts that took place as Israel assumed military and political control of the West Bank. This is important because such separations facilitate the evaluation of land so that it can be made legible to the legal order. These legal processes in turn participate in the larger processes of dispossession.

We also have learned over the last two chapters that, in this way, cultivation has always been an index used by state power to justify its various technologies of rule, whether through the law, through acts of coercion and violence, or through processes of encouragement such as economic prosperity and agricultural development.

However, cultivation is also a political practice that produces political being quite distinct from predetermined political subjectivities of the state. It is an embodied practice that is enmeshed in a host of ecological processes such as rainfall and drought, as well as the social and political forces that we generally think of. Cultivation, then, is part of a process only partly under human control, and cultivation does not pre-figure, but emerges from that interaction.

The question should then become: What practices and processes make agriculture possible in the West Bank as we see it today? Is it the simple equation of policy initiative equals corresponding change? Only by understanding this combination of forces do we begin to grasp the shifts occurring in cultivation in the West Bank. As Timothy Mitchell has shown, an oppositional politics that leaves unexamined the host of effaced forces grants logics of reason, capital, and the state the power they depend on.<sup>226</sup> In contrast to the *politics of representation* considered here, the next two chapters explore a *politics of persistence*.

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<sup>226</sup> c.f. (Mitchell, 2002)

## PART 2: CULTIVATION AS CONCRETE PRACTICE

### **Chapter 3: On the Durability of Rainfed Farming**

Part Two (Chapters 3 and 4) explores the second aspect of the *question of cultivation*: not as an index or instrument of the law, but rather as a site of politics. Cultivation here resides in the second sense of *zill*-shadow: not as trace but as a shelter that harbors potential alternative forms of political being. Chapter 3 explores how rainfed farming practices enable a kind of durable attachment to the land and explores this theme as conceptualized in Arabic language sources that deal with the land question, cultivation, and belonging more generally. Chapter 4 in contrast, considers the way that certain legal classifications of land such as ‘Nature Reserve’ in fact enable farmers to render annexation of their land more difficult. Together, these texts and practices offer fragments of overlooked and obscured histories of cultivation that, as I show, offer powerful understandings of political being as an open question. Exploring the work of these traces in the present that affords us a view of novel forms of political community that are otherwise rendered invisible in linear accounts of the history of cultivation.

What has enabled the remarkable durability of rainfed practices in the face of great economic and political restrictions? Also known as dryland agriculture, rainfed production is a suite of planting, tillage, and plant protection strategies that exploits soil moisture for growing crops without irrigation. It also uses water catchment strategies like cisterns to collect water during the rainy season for watering crops in dry months. Rainfed production has been the basis of agriculture in Palestine for generations owing to

the dearth of freshwater, and as such developed through highly sophisticated and localized practices of cultivation. Rainfed or dry farming has been the subject of great interest in Palestinian scientific institutes, as well as a scientific interest in many arid and semi-arid regions of the Americas, Australia, and Africa; the critical study of which would be a worthwhile academic enterprise. I acknowledge that the category of 'rainfed farming' obscures the diversity of practices described under its sign; however, here I use 'rainfed farming' as a hermeneutic concept to open discussion between certain practices on the land and the political relationship to that land.

The durability of rainfed farming enjoys resonances with work emerging on the history of settler-colonialism. In his important study of land and political community in the Creek Nation of Oklahoma in the mid-nineteenth century, David A. Chang has shown that it was small-scale farming practices that made certain kinds of national self-fashioning possible. While freed slaves were denied land tenure rights throughout Southern United States, Creeks of African descent were given land rights within the Creek nation. This radically open understanding of national belonging afforded Native people of mixed African and/or European descent a place in the Creek Nation. Chang argues persuasively that it was the small-scale farming practices that nurtured this notion that all "had an equal interest in the soil".<sup>227</sup> The emphasis on small-scale production also fostered independence, because, "like other Creeks, black Creeks largely followed a small-farm strategy that emphasized home production, allowed for limited trade, and

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<sup>227</sup> (Chang, 2010, p. 39)

provided for a level of autonomy".<sup>228</sup> Ultimately, according to Chang, the land tenure system produced a uniquely inclusive sense of "composite nationhood" so that "being Creek meant belonging to a polity, not a race, and that the lands were to be defended as national property available to all who were part of the nation".<sup>229</sup> My analysis below extends the important argument put forward by Chang: I pay greater attention to precisely how cultivation practices are productive of orders not only within the realm of private property, but also of political being itself. In other words, this section of the dissertation explores the itinerary of political ontology through cultivation practice without assuming it to be driven by an underlying logic.

For my purposes in this chapter, rainfed agricultural practices will serve as a locus of inquiry to explore the genealogy and politics of Palestinian cultivation practices. Although early Zionist scientists not only studied but also advocated rainfed agriculture, it was clear by the mid-1920s that the emerging generation of scientists in the *yishuv* became more interested in intensive irrigated production of fodder crops especially to support dairy farming.<sup>230</sup> Yet what is striking in the case of Palestine is that beginning from the early writings through current day, rainfed agriculture has maintained the interest both through the practices of Palestinian cultivators but also in the study of Palestinian agriculture by Palestinians. Today, as it has for generations, rainfed farming dominates the landscape of the West Bank. In 2005 for example, rainfed production made

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<sup>228</sup> (Chang, 2010, p. 40)

<sup>229</sup> (Chang, 2010, p. 40)

<sup>230</sup> (Penslar, 2000)

up about 85 percent of total agricultural land in the West Bank and Gaza Strip.<sup>231</sup> Aside from parts of the northern West Bank and the heavily industrialized production in the Jordan Valley, the vast majority of production in the West Bank is non-irrigated. If production in the West Bank was so ‘successfully’ modernized after 1967 as we saw in the last chapter, then what accounts for the persistence of rainfed production?

Scholars give two main explanations. First, lack of freshwater resources and perhaps more importantly, appropriation of groundwater resources by Israel made rainfed production the only viable option for Palestinian agriculturalists.<sup>232</sup> Second, the fall in agricultural production, the decline in agricultural livelihoods, and the urbanization of the West Bank meant that rainfed farming of trees and nuts better suited the time constraints of part-time farmers.<sup>233</sup> Both of these explanations offer helpful and accurate frameworks to consider the constraints, both ecological and political, which affect Palestinian farmers. Rainfed farming may well be a survival strategy or last resort, but here I suggest that there are other reasons for its vitality. Could it be that rainfed farming offers certain purchase against processes of land alienation and dispossession that Palestinian farmers have faced? This chapter will explore this question through tracing the historical trajectory of thinking on and practice of rainfed farming by Palestinians. The range of technical studies dedicated exclusively to rainfed cultivation produced by Palestinians spans 1927 to 2005.<sup>234</sup> This span indicates the depth of academic interest in the topic. Moreover, this figure does not exclude the plethora of studies on Palestinian

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<sup>231</sup> (Assaf, 2010)

<sup>232</sup> (Amnesty International, 2009; Assaf, 2010)

<sup>233</sup> (Tamari, 1981)

<sup>234</sup> (ARIJ Applied Research Institute-Jerusalem, 1994; H. Awartani, 1982; Daiq, 2005; N. Nassar, 1927)

agriculture by Palestinians generally or studies made by the formidable local ‘folkloric’ tradition that saw surges in the 1920s and 1980s.<sup>235</sup> This ethnographic tradition centered on Tawfiq Canaan and his colleagues in their *Journal of the Palestine Oriental Society*, which ran from 1922-1948.<sup>236</sup> A host of other technical studies have been produced on the related topics of sustainable agriculture and local seeds, especially in more recent years.<sup>237</sup> In a conceptual register, these texts point to a deep understanding of how certain practices such as rainfed farming wards off state territorialization and consolidation of control over land, issues that are central to settler colonialism. The written record of such thinking illustrates the longstanding interest in the relationship of dispossession of land and the cultivation of land.

At stake is neither the peasant ‘everyday resistance’ of James C. Scott that enacts a distinction between practice and abstractions like the law or state<sup>238</sup>, nor the fetishized peasant resistance figure of Palestinian nationalism<sup>239</sup>; rather, at issue here is an embodied practice of leveraging agroecological and political orders in the service of collective persistence on the land. As Timothy Mitchell has argued, in Scott as well as most social science scholarship, power “appears through” ostensibly free standing political orders or geographical arrangements, whereas it should be considered to be

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<sup>235</sup> (Tamari, 1992, 2004)

<sup>236</sup> I have not been able to include my readings of the studies by Canaan and his “Jerusalem Circle” of native ethnographers in this dissertation, but hope to at a future date as they include many valuable insights into local academic thinking in the 1920s about peasant practices and the agricultural cycle. (Canaan, 1927; Tamari, 2004)

<sup>237</sup> (Mohammad S Ali-Shtayeh & Jamous, 2005; Mohammed S Ali-Shtayeh & Jamous, 2006; Hreimat, 2001; Iseed, 2010; Kurzom, 1997)

<sup>238</sup> (Mitchell, 1990, 2002; P. J. C. Scott, 1987)

<sup>239</sup> (Tamari, 1992)



something made through practice that gives form to any concepts.<sup>240</sup> Today across the West Bank one is not likely to hear Palestinians discuss the political situation in the worn terms of state politics. This situation has rendered tired terms like ‘independence’ and ‘statehood’ that are less able of giving expression to the aspirations of West Bank Palestinians. Moreover, as many have noted, the process of distancing has removed the physical presence of various structures of Israeli occupation from the everyday interactions of Palestinians.<sup>241</sup>

One of the primary ways that Palestinians do interact with Israeli soldiers and settlers in the West Bank is in the farmlands where they work in the fields, harvest olives, graze animals, or travel. This is important because cultivation is a practice that produces its own effects that articulate uneasily with established political orders like law and economy. In this way, cultivation has become a flashpoint for the question of sovereignty and territory in the West Bank as the Oslo-process designated ‘Area C’ is overwhelmingly constituted by farmland and grazing land. In tracts like Area C where Palestinians have little political sovereignty, irrigation would be impossible, but rainfed production may afford a certain measure of what might be called traction. What processes enable this?

The complex array of microclimates, seed, local cultivars, landraces, topographies, climatic fluctuations, adaptations of plants that rainfed production depends on constantly generates new forms of attachment to land by exploiting the volatility and

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<sup>240</sup> This echoes Timothy Mitchell’s seminal critique of James Scott regarding the operations of power in peasant communities, where he argued, “Working through the techniques of enframing, power will now appear as something essentially law-like. It will seem to be external to practice, as the fixed law that prescribes a code against which changing practices are then measured.” (Mitchell, 1990, p. 571)

<sup>241</sup> (Abourahme, 2011; Gordon, 2008; Weizman, 2007)

recalcitrant qualities of plants that enable a dynamic attachment to a place and a refusal to perform to the script of state power. These practices enable a collective politics that is not necessarily state-based.<sup>242</sup> In fact, it frustrates projects of state territorialization and enrollment, especially in hilly, rugged areas where rainfed cultivation predominates. In contrast to a mere political-economic calculation, cultivation emerges as a novel political practice that does not necessarily adhere to the *telos* of the state form.

Let me be clear: cultivation is a complex concept and practice. My emphasis on political practice in this exploration of the ‘durability’ of rainfed cultivation does not aim to discount the material constraints of farmers facing both crushing Israeli restrictions on agriculture, nor the material fact of water shortage in a semi-arid climate. Little persistence is possible in the face of state violence, a brute force which is invoked all too often in the West Bank. I do not intend to detract from the pervasive nature of the current colonial order that seeks to dispossess Palestinians. However, my study examines rainfed production practices in order to unpack how a combination of forces contributes to persistence on the land. It is my contention that through the embodied practice and accumulated experience of cultivation, in this case rainfed cultivation, farmers constantly produce a remarkably ‘durable’ persistence and attachment to the land that is not visible when limiting our frame of analysis to the political economy of Palestinian agriculture.

This chapter is divided into four sections. First, I explore a text published in 1927 that aimed to introduce a modern concept of dry agriculture to Palestine. Second, I survey efforts by scholars to understand the persistence of rainfed farming in Palestine. Third, I

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<sup>242</sup> (Mitchell, 2011a)

delve into the specific biophysical qualities of rainfed farming practices and ecological arrangements to illustrate their role in producing a kind of durable attachment to the land. Finally, I explore the writings of a particularly insightful text on the question of land and identity to demonstrate early thinking on cultivation as political practice. One of the central arguments of this chapter is that Palestinians, through writing and through cultivation practices, have confirmed the importance of rainfed agricultural production for continued persistence in rural areas.

#### **SECTION I: DISCOVERING RAINFED FARMING**

In the Mediterranean city of Haifa, things were not going well for Najib Nassar. A Palestinian from Haifa, he was born in 1865 to a middle class family of urban professionals. Unlike his siblings, he was not an adept businessman or professional. He instead became involved in fervent political debate swirling in the Ottoman Empire, especially in the Syria province of which Palestine was a part. He considered himself an Ottoman subject and, unlike some of the other nationalists of the time, sought Arab autonomy within and not outside of that structure. There are many reasons for this position which are not germane to the discussion here; suffice it to say that his role in fomenting Palestinian national consciousness was positioned in relation to his belief that the Ottoman system, despite its many faults, provided the best hope for a pluralistic society. Raja Shehadeh believed that Nassar opposed European colonial control, the prospect of which distressed him more than quasi-autonomy for Arabs under Ottoman

rule.<sup>243</sup> This point is also made, though less emphatically, by Rashid Khalidi.<sup>244</sup>

Disillusioned by his failed attempts as a businessman, Nassar turned to writing and journalism, where his positions for Arab autonomy earned him the ire of Ottoman authorities. In 1908 he founded the *Al-Karmil* newspaper, which was published in Arabic and named for the storied mountain overlooking Haifa on the northern Mediterranean coast of Palestine. His newspaper was part of a group of others including *al-Quds* in Jerusalem and *Falastin* in Jaffa, which alerted the Palestinian newspaper-reading classes to the dangers of Zionism and Arab feudalism in the increasing pressure on lands brought by the settlement enterprise. He and other middle class products of Western educational institutions in Palestine and beyond, helped to cement Palestinian national awareness in response to the Zionist claim to Palestine.<sup>245</sup> *Filastin* in particular carried a weekly column called “*Rasāil Fallāḥ*” or “Letters of a Peasant” beginning in 1911 in which the viability of the farm economy and the issue of land sales were discussed.<sup>246</sup> In his seminal work on Palestinian identity, Rashid Khalidi asks how Palestinian Arabic-language newspapers played a role in cementing a link between urban intellectuals and peasants in their opposition to Zionism. He said that of the early Arabic newspapers, *al-Karmil* “was by far the most outspoken in its opposition to Zionism.”<sup>247</sup> Nassar went into hiding in 1915 in order to escape arrest and trial for his public positions. This three-year period of underground life living with peasants and Bedouin (far outside his prescribed social

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<sup>243</sup> (Shehadeh, 2010, p. 21)

<sup>244</sup> (Khalidi, 2010, p. 19)

<sup>245</sup> (Khalidi, 2010) (Ayalon, 2004)

<sup>246</sup> For example the June 15, 1912 letter discussed a conversation between the author and his friend, a fresh produce vendor in the city (“*Rasāil Fallāḥ*,” 1912).

<sup>247</sup> (Khalidi, 2010, p. 124)

world of urban Haifa) gave him an intimate view of Zionist land acquisitions and its relationship to both local and absentee landowning classes. Although he had been writing about the process for at least five years, he also became acquainted firsthand with its harsh effects on Palestinian peasants who found themselves increasingly beholden to new landlords who aimed to dispossess them. With the fall of Ottoman rule and the establishment of the British Mandate in Palestine, Nassar's writings focused on the plight of Palestinian cultivators and stemming the tide of the Zionist movement's land acquisition and settlement in Palestine. In views he shared with several prominent Palestinian intellectuals including Shukri al-ʿAsali, Ruhi al-Khalidi, and ʿIsa al-ʿIsa, Nassar believed that the collusion of the British authorities, the feudal land system, and the increasing desperation of the peasants were making Zionist control possible.<sup>248</sup> Through his writings in *Al-Karmil* he advocated the support and encouragement of Palestinian agricultural life as a means of asserting Palestinian claims to the land. To ground his analysis in the lived reality of those he wrote about, Nassar embarked on two treks around Palestine. Nassar then wrote dispatches from the field and published them in his newspaper. The first trip in 1922 stretched over three months and resulted in twenty-three letters covering a range of topics including economic, political, environmental, and agricultural matters. The second trip, over ten months, resulted in sixty-three letters from the field. Walid Khleif, editor of the compiled volume in Arabic, compared Nassar's letters to a kind of Palestinian "encyclopedia or dictionary".<sup>249</sup> He was most concerned with the loss of Palestinian land through sales to the Zionist movement, and with two

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<sup>248</sup> (Khalidi, 2010, p. 114)

<sup>249</sup> (N. Nassar, n.d., p. 8)

related domains of Palestinian life: education and agriculture. Nassar believed that improvements in these arenas would enable Palestinians to better meet the challenges to livelihood that colonialism posed. He strongly believed the wellbeing of the land was related to the wellbeing of the national enterprise. In a dispatch from the famed *Marj Ibn Amir* plain he counseled local people who were at the frontlines of land dispossession in the Galilee:

We met with local people and spoke with them about their narrow attitude and we said there is no way out of the danger except the unceasing work of building the soil, its skillful cultivation and the planting of trees; that they should establish a treasury of 500 olive seedlings for each son of the village; that they do not sell any of their land to urban land brokers, some of whom have in turn sold the land; that they guard against embroilment in religion; that they should educate their children both scientifically and practically. We saw the despair seeping into their being because of the lack of rain and the danger encircling them. So we encouraged them by telling of the large cultivation efforts of their brothers in the villages of Jenin, Tulkarem, and Nablus.<sup>250</sup> (*My translation*)

Nassar weaves together the impending danger of dispossession through land sales with the nurturing of the land through natural fertilizers and planting of olive groves. In another dispatch, he sharply attacked local Arab landlords for selling their land, shaming each

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<sup>250</sup> (N. Nassar, n.d., p. 143)

known seller in the Jenin area by name.<sup>251</sup> Nassar also criticized government policies that taxed olive tree seedlings, saying that, “the [Mandate] government does not profit from these monies yet it hurts the people and blocks rehabilitation of the land”.<sup>252</sup> He commented on the situation of these areas across Palestinian villages and cities alike, traveling to Haifa, Nazareth, Nablus, Jenin, Tulkarem, Qalqilia among others. Nassar believed in the power of his dispatches, read in the seemingly distant cities, to embarrass transgressors and inspire Palestinians to oppose land sales and reassert themselves through concrete actions on their land.<sup>253</sup> This imperative to retain and improve Palestinian agriculture is illustrated in a single intriguing Arabic technical text, where Nassar combined articles he had published with translations from a scientific book, *Dry Farming*, published in 1911 by American scientist John Widtsoe.

### *Connecting studies*

Nassar was one of the first Palestinians to articulate in writing the problems of land, food, and water in relation to the national cause. His 1927 Arabic volume, *Azzirâa al-Jaffa* (Dry Agriculture), is a little-known book, based on a collection of articles published in Nassar’s newspaper, whose stated aim was to improve Palestinian methods in dry agriculture by learning from U.S. experiences. These farming techniques, refined by native cultivators in arid regions for generations, became subject of great scientific interest in the late nineteenth century when Europeans settled drier regions of the

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<sup>251</sup> (N. Nassar, n.d., p. 129)

<sup>252</sup> (N. Nassar, n.d., p. 130)

<sup>253</sup> (Shehadeh, 2010, p. 212)

Western United States. Codified by agricultural scientists as ‘dry farming’ or ‘dry-land farming,’ the volume advocated methods to improve agriculture in four registers: the retention of soil moisture, availability of moisture by plants, plant breeding for drought tolerance, and finally, erosion control techniques.

In an interesting move, Nassar uses different phrases in Arabic for the same idea, sometimes using direct translation from the English *ziraa jaffa* (dry farming). Yet in the first full sentence of the text, and other places, he uses the deeply colloquial term for nonirrigated agriculture, *báli*. Palestinians use the term *báli* or *báal* as an adjective to describe fields, crops, or fruits that rely only on rain and dew for water. It is believed to be a reference to the Canaanite title for master god Baal, who was associated with *Hadad*, the Canaanite god of rain and agriculture. The word remains in common usage today. *Báli* vegetables elicit higher prices and are prized for their superior taste, believed to be a result of slower growth. Through the subtle use of both the technical and vernacular terms in the Arabic Nassar validated both local knowledge and exposed a local traffic in concepts.

For a leading nationalist intellectual, Nassar’s agricultural concerns appear to be disarmingly pragmatic. We learn that the published volume is a collection of articles that were also published in Nassar’s *Al-Karmil* newspaper. He matter-of-factly points out the impetus for the study in the introduction to his translation:

Most of the land in Palestine and Jordan and Syria does not receive more than 25 *qatran* and our sun is Eastern and our wind is dry, these lands cannot be made



agricultural to give a sufficient harvest except with irrigation or following the ways of dry agriculture. Since irrigation is impossible but in a few small areas of these lands, it is necessary to learn ways and principles of dry farming, and since this method has remained neglected until the modern age— it is our opinion to collect the findings of scientists, writers, and technical research departments and print them in an abridged form in Arabic in al-Karmil newspaper and then collect them into a special volume for the Arab farmer.<sup>254</sup> (*My translation*)

Here Nassar claims that given the limited capacity for irrigation, modern dry farming must be adopted by updating the traditional practices. This is not a mere question of pragmatism. Rather, it strikes at the heart of one of the most important debates that gave rise to nature-as-national-problem in Palestine: the so-called carrying capacity of the land. The fact of Nassar’s translation of this text on rainfed or nonirrigated agriculture and not for irrigated production illustrates his direct assertion that it is only dry agriculture that can succeed in the long term. This stood in direct opposition to Zionist efforts, which were exclusively focused on implementing and improving irrigated agriculture<sup>255</sup>.

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<sup>254</sup> (N. Nassar, 1927)

<sup>255</sup> Raja Shehadeh puts this succinctly; “He believed that the scarcity of water in the country made it important for farmers to know about methods of cultivation that required minimal amounts of water. In this Najib was ahead of his time. He was thinking of developing the kind of agriculture suited to a country that suffered from a scarcity of water while the early Zionists were going the other way. They were preparing schemes for water-intensive farming, for which they needed to control the water resources. With the creation of Israel, this would become the hallmark of a state that, in pursuing policies based on then popular notions of controlling nature rather than living in harmony with it, would create endemic water shortages in the country.”(Shehadeh, 2010, p. 25). For more on irrigation: (K. W. Stein, 1987, p. 101); (Kamen, 1991, p. 28)

Water conservation, irrigation and agricultural production developed as an important theme for Palestinians during the late nineteenth century as the export-oriented citrus industry expanded. While irrigation was a near obsession of the Zionist settlement engineers, for Palestinians the question of rain and water for crops was more complex and did not square with the metrics of calculation employed by the Zionist researchers.<sup>256</sup> For Nassar rain itself opened the question of the land's potential to support Palestinian life. This life, as farmers who work in *bāli* production recognize, is only partly under human control. This question transcended his intellectual and political aims. Nassar had a farm in the Beisan area where the highest percentage of irrigated land by district (11.7 percent)<sup>257</sup> was located, almost all of it Jewish agriculture. He saw the utmost value in dry-agriculture or *bāli* production as it offered a way to maintain and even expand Palestinian agricultural land under production. There was a major jump in the amount of irrigated Arab agricultural land, from 3000 dunams in 1927 to 36,500 dunams in 1939 with similar jumps in Jewish agriculture as well. However, this is dwarfed by the vast bulk of agricultural land that was farmed extensively without irrigation. His was a pragmatic approach but one that was intertwined inextricably with the displacement of Palestinian farmers and the decline in rainfed agriculture.

In contrast, Zionist activists, Ruppin in particular, were wont to argue that Jewish land purchases helped indebted Palestinian peasants because the capital from the sale could be used to maintain or even improve their living standards by intensifying production. This benefitted Zionists because they could then use the purchased land to

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<sup>256</sup> Here the work of Samer Alatout is invaluable, especially (K. W. Stein, 1987, p. 101) and (Alatout, 2006)

<sup>257</sup> (Kamen, 1991, p. 30)

build settlements. Kamen discusses this debate between Jewish settlement leaders and British authorities at length<sup>258</sup>, arguing that the land purchases had little effect on the farming practices in surrounding Arab villages. He does however note that the data available from the Mandate authorities make it difficult to get a clear picture of landholdings and agricultural output over time. These texts can be read to link a lingering subtext that *particular* kinds of practices like dry agriculture enable persistence on the land.

Thus, as we saw in the first chapter, the modern object-in-the-making, ‘Palestinian agriculture’, needed to be set in sharp contrast to practices emerging from the Zionist movement<sup>259</sup>. In the case of Palestinian intellectuals and likely for most Arab cultivators, the distinction between modern and traditional appears to have been immaterial. One might argue that this was simply due to their lack of expertise. Rather, I propose that it stemmed from ‘active indifference’ to the study of agriculture in preference for the practice of cultivation itself. In hindsight we can see clearly that this active indifference regarded Zionist academic and scientific translation of Arab practices trivial and even dangerous. Palestinian aversion to the kinds of academic study of their own world might be understood to result from ignorance or inability or lack of academic culture; but they are more profitably understood as wrought from a political practice, which aimed to both disrupt and render inadequate the scientific knowing of the land that was being propagated by Zionist scientists. Throughout the texts like those of Nassar there is a tracking between two poles of recognizing and even celebrating the

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<sup>258</sup> (Kamen, 1991, pp. 174–184)

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‘accomplishments’ of countries like the United States in dry agriculture, and yet simultaneously insisting on the particularity and history of traditional Palestinian methods. In one of his many digressions from the English text, Nassar illustrates this entangled position that is characteristic of the *Nahda* period:

Our mighty ancestors established ancient cities and were models of effort and vigor. They practiced all kinds of agriculture whether in their great dams or amazing irrigation canals in Iraq and Yemen. There are historical reports in the Torah, Gospels, and Eusebius and all other modern and ancient histories about olives, figs, grapes, and field crops in Palestine and Syria. The great Arab cities like Baghdad and Damascus and others whose inhabitants were in the millions were witness to the Arab renaissance and their advancement in the days that Europe was languishing in darkness and America was unknown. Why do we delay and not follow the example of ancestors and of contemporaneous Europeans and Americans and walk in their path, instead of leaving our lands to go waste and our cities to go to ruin and poverty to seize us? May the Arabs open their eyes to what modern nations are building. Let us learn and benefit from the experience of the amazing American nation in dry agriculture. If we invest our land with modern technical principles we will restore the wealth of our ancestors and the prosperity of our land.<sup>260</sup> (*My translation*)

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<sup>260</sup> (N. Nassar, 1927, pp. 235–236)

Nassar invokes a common theme of his era in calling for redemption of the land to a past glory.<sup>261</sup> In calling upon the ‘amazing’ American system, he reshaped knowledge connections and asserted Palestinian national claims, drawing from the resources of that dominant narrative itself. Nassar’s position is best understood in relation to his decades of work bringing to light the dispossession of peasants by the Zionist land purchases and collusion of Arab landowners. In fact Nassar may have also personally involved himself in assisting *fallahin* in land disputes as early as 1909 with one of the earliest violent confrontations surrounding the village of al-Shajara in the *Marj ibn ‘Amir*.<sup>262</sup> This intersection of agricultural practice with the national imperative to stem the takeover of land by settlers produced a novel problem that is explored next.

#### *Appropriating ‘Dry Agriculture’*

For Nassar the economic, ecological and political realms were inseparable. Agricultural practice could not be seen in isolation of the dispossession of peasants he had spent ten years writing about in his newspaper. He cites the ‘economic distress’ of Palestinians in the British Mandate period in which he wrote:

We relied heavily on a book collected by the respected agricultural scientist, Mr. John Widtsoe, from the most reliable sources and scientific experiments. We believe that through this work of ours we serve the country a glorious service and

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<sup>261</sup> (D. Davis, 2007; Mitchell, 2011a)

<sup>262</sup> (Khalidi, 2010)

facilitate for the *fallah* knowledge of how to increase production to survive the economic distress we are in.

In responding to this perceived imperative, Nassar believed that modern insights were needed if dry agriculture were to enable Palestinian peasants to survive economic hardship. In doing so he located livelihood and persistence on the land in water and soil conservation with few external inputs, which were the hallmark benefits of dryland production. The most important insight from Nassar was his insistence on the centrality of the Palestinian peasant livelihood. For Nassar, if farmers could make a reasonable living they would be less likely to leave the land or sell their land to eager prospectors. Ironically, he claims to have directed the volume at farmers, most of whom at that time would not have had access to written materials. It marks the beginning of a tradition of Arabic language how-to guides written by Palestinians. *Azziraa Al-Jaffa*, however was a translated text from an American scientist, John Widtsoe. How did it travel to Palestine?

What is made abundantly clear by Widtsoe's text, Nassar's translation, and the other works that we have seen in chapter one, is that these texts cannot be reduced to expressions of Western knowledge applied to the non-West. Rather, they are more profitably understood precisely through the encounter of forces (historical, human, or otherwise) at the site of knowledge production. In particular, I would like to explore next how Widtsoe's texts cannot be separated from the colonial history of the American Great Basin, in the same way that Nassar's translations and Zionist studies are best understood within their deep entanglement in local agricultural knowledge and colonial violence.

It is unlikely that the American scientist John Widtsoe would have envisioned how his 1911 book on dryland farming would travel to the Middle East. Born in Norway, the loss of Widtsoe's father at an early age and his family's conversion to Mormonism, precipitated their emigration to the then Utah Territory in 1883. Widtsoe later completed a doctorate in Germany while a missionary, and returned to Utah in 1900, where he grew in prominence and responsibility, eventually becoming a noted agricultural scientist who specialized in dry agriculture and an Elder in the Mormon Church. He served as the president of the Agricultural College of Utah and published widely on matters of agriculture and Mormonism. He also served a Mormon representative in Europe and likely visited Palestine several times to foster Church work there<sup>263</sup>.

Widtsoe shared the zeal of other settlers arriving in the semi-arid rangelands of the Great Basin region in the American West. He believed that the settlement of Utah brought many benefits to an otherwise barren area. Writing in 1910, Widtsoe stated:

We need harbor no such envyings, for in the conquest of the nonirrigated and nonirrigable desert are offered as fine opportunities as the world has known to the makers and shakers of empires. We stand before an undiscovered land through the restless, ascending currents of heated desert air the vision comes and goes. With striving eyes the desert is seen covered with blossoming fields, with

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<sup>263</sup> (Berrett & Van Dyke, 2005, pp. 268–273)

churches and homes and schools, and, in the distance, with the vision is heard the laughter of happy children. The desert will be conquered.<sup>264</sup>

The ‘desert’ that Widtsoe describes is also a human landscape that had to be subjugated. As historian Ned Blackhawk has shown, the Great Basin a mere 30 years before Widtsoe’s arrival shook with a savage conflict between federal authorities, indigenous groups, New Mexicans, and Mormon settlers. This left bands of Piute, Ute, and Shohone peoples embroiled in bitter struggles over shifting alliances with various outside interests. Most histories of the period in the western United States overlook the centrality of violence to the colonial order, evidenced by the frequent attacks on Native peoples and enslavement of Piutes (usually children) by New Mexicans, Mormons, and other tribes.<sup>265</sup> Blackhawk locates the emergence of this violent order with the arrival of Spanish colonizers from the south and argues effectively that the violence was constitutive, rather than external to European settlement of Utah in the mid-nineteenth century.

This pre-history of Utah stands in sharp contrast to the story presented by Widtsoe in his conventional narrative of pioneers braving disease, hunger, climate and American Indian raids to establish fledging modern settlements in wilderness of the western United States. Even in his more sober technical texts, Widtsoe referred occasionally to “the brave pioneers who fought the relentless dryness of the Great American Desert.”<sup>266</sup> As critical historians of the American West are now arguing, Widtsoe’s scientific

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<sup>264</sup> (John A. Widtsoe, 1919, p. xi)

<sup>265</sup> (Blackhawk, 2008, p. 239)

<sup>266</sup> (John A. Widtsoe, 1919, p. 365)



interventions did not take place in a historical vacuum but rather in a space forged by the cocktail of violence, dispossession, and colonial zeal, the brunt of which was borne by Great Basin American Indian communities. We saw a similar exploration of this question in chapter one with the experiments of Elazari-Volcani on the ‘Fallah’s Farm’.

To disseminate academic knowledge on agriculture, Widtsoe sought to “assemble and organize the known facts of science in their relation to the profitable production of plants without irrigation in regions of limited rainfall.” Thus, he published *Dry-Farming: A System of Agriculture for Countries Under a Low Rainfall* in 1911. The volume was directed primarily at dry-land farmers, though he predicted the rapid development of the field of dry agriculture, which would produce more technically-oriented works for experts. The text is part technical field guide, part academic literature review. Most of the academic studies are drawn from scientists working at American and Canadian universities based on results from field observations in far-flung research stations like ‘Indian Head Farm’ in the Canadian province of Saskatchewan. In the chapter “Modern Dry Farming in the United States,” Widtsoe credits the Mormon movement in Utah with the first trials in the U.S. of modern dry farming in the 1850s. However, he states that dry-farming is only the modern manifestation of what he calls an “ancient practice,” making it “improbable that intelligent men and women could live in Mesopotamia, for example, for thousands of years without discovering methods whereby the fertile soils could be made to produce crops in a small degree at least without irrigation.”<sup>267</sup> Therefore, Widtsoe brings a broader reach of agriculture science principles to bear on

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<sup>267</sup> (John A. Widtsoe, 1919, p. 351)

‘dry farming.’ He furnishes insights from topics like climate science, soil morphology, soil-water retention, plant and root structure, transpiration, tillage practices, and cropping systems among others. These are then buttressed by descriptions of experimental results and anecdotal agricultural histories from around the world.

How did Nassar tackle Widtsoe’s celebration of conquering the desert and its peoples? Would not this remind him of Zionist narratives?<sup>268</sup> From Nassar’s text one senses a budding understanding of the similarities in the discourse of colonialism between North America and Palestine. While on occasion Nassar celebrated the ‘amazing’ success of American dry agriculture, curious omissions stalk the text. Two examples illustrate this.

First, at the beginning of a section on the first experiment stations to study modern dry-farming, Widtsoe states, “The brave pioneers who fought the relentless dryness of the Great American Desert from the memorable entrance of the Mormon pioneers into the valley of the Great Salt Lake in 1847 were not the only ones engaged in preparing the way for the present day of great agricultural endeavor”.<sup>269</sup> This ornate language was used occasionally by Widtsoe to emphasize the early accomplishments of Mormon pioneers who had arrived to Utah a generation before he had. However, this statement was curiously removed in Nassar’s translation, and the Arabic text picks up at the following sentence. Nassar seems to have omitted Widtsoe’s description of American pioneers “fighting the dryness” of the new land.

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<sup>268</sup> (John Andreas Widtsoe, 1947)

<sup>269</sup> (John A. Widtsoe, 1919, p. 365)

Second, Widtsoe's English version cites the scientific study of a prominent early Zionist agronomist, Aaron Aaronsohn, on the carob tree (*Ceratonia siliqua*) among others that illustrated the yield potential for the tree's protein-rich fruit under nonirrigated production.<sup>270</sup> However, Nassar's Arabic version entirely omits the Aaronsohn study but includes all of the other studies of the English version in the section.<sup>271</sup> Curiously, Nassar did include another reference to Aaronsohn in Widtsoe's text in the announcement that he had found wild emmer – the wild ancestor of wheat.<sup>272</sup> This translation of the original 'Palestine' section was accompanied by a long addendum about the impossibility of large-scale irrigated agriculture in Palestine.

What I wish to propose based on these two clear omissions is that Nassar's important omissions illustrate his consciousness of the similarities between the master-narratives of Zionism that called for the redemption of the barren land and how they bear resemblance to Widtsoe's call to conquer the Utah desert. It must be admitted that Nassar does not omit all references to Zionist scientists, nor does he spare admiration for the accomplishments of American scientists in the field of dry agriculture. However, the above omissions gesture to an awareness that the Palestinian national movement could not afford to overlook the pitfalls of American colonialism. This strain of Palestinian thought was not explicitly expressed until decades later;<sup>273</sup> however, based on this early evidence it could be argued that the seeds for comparative settler-colonial approaches can

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<sup>270</sup> (Widtsoe 252–253)

<sup>271</sup> (N. Nassar, 1927, pp. 164–165)

<sup>272</sup> (N. Nassar, 1927, p. 255)

<sup>273</sup> (Abu-Lughod & Abū-Labān, 1974)

be found in the work of Najib Nassar, if not other writers. While not necessarily identifying Palestinians with Native Americans, Nassar saw parallels between the narratives of settler-colonial projects and may have wished to de-emphasize statements from the English text for his Arabic-reading audience.

Perhaps equally importantly, Nassar saw a relationship between agricultural knowledge and dispossession of peasants. In true form he attempted to intervene to nurture and cultivate extensive agricultural practice in order to stem land sales and other dispossessions. In other words, the economic situation led him to translate the dry-agriculture text because he thought that updated methods would make Palestinians more competitive. This was clearly not only a choice for rainfed agriculture but also a choice against irrigated production. By the time Nassar published this essay, the Zionist movement had already begun experiments with irrigated production. By the 1930s the scientific leadership had overruled the older generation of Elazari-Volcani to advocate strongly for the ‘mixed farming’ that required irrigation for the production of fodder crops for dairy farming.<sup>274</sup> A widely read journalist, Nassar no doubt was aware of the widely circulating scientific literature in English and would have been aware of efforts to shift to irrigated production. Thus it is important to note that Palestinian intellectuals were advocating a preservation of Palestinian rainfed agriculture in the midst of and likely in opposition to the increasing efforts of Zionist organizations to incentivize and spread intensive irrigated production.

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<sup>274</sup> (American Economic Committee for Palestine, 1937; Penslar, 2000)

## **SECTION II: UNDERSTANDING RAINFED FARMING**

There are at least two kinds of explanation made by scholars and intellectuals for the persistence of rainfed agriculture. The first explanation is an economic argument which states that the limitations of unproductiveness of grains in 'traditional' systems and the geographic circumstances (lack of water, rugged terrain), have compelled Palestinians to practice rainfed production of fruit and nut trees. This argument was prevalent in the mid-1980s where scholars grappled with the transformations shaping the West Bank since Israeli occupation in 1967. For example, the Palestinian economist Hisham Awartani in his 1982 dissertation thesis on rainfed farming in Palestine notes that synthetic fertilizers, mechanized tillage, and chemical pesticides are needed to make local rainfed production more efficient. Such deficiencies lead, according to Awartani, to poor development of agriculture.

This is manifested by such attributes as an exceedingly rough topography, excessive rockiness, irregular and strictly seasonal rainfall, and frequent occurrence of very hot weather. Geographic attributes have severely limited the area of land fit for irrigated farming and resulted in the excessive dependence on rainfed patterns of agriculture.<sup>275</sup>

Generally those working especially from economics-oriented frameworks cite rough topography, lack of water resources, and chemical inputs as central handicaps to

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<sup>275</sup> (H. Awartani, 1982, p. 409)

Palestinian agriculture.<sup>276</sup> As we see next, these geomorphological characteristics can also be read in other ways.

In another strain of this economic argument, Awartani documents the restrictions on Palestinian access to water resources in the West Bank and the extensive restrictions on cultivation through a complex array of military orders and land confiscation mechanisms. Most importantly, he argues persuasively that Israeli policy favored annual crops that left less of an imprint on the land. He states Israeli authorities were, “Curtailing all patterns of farming which entail visible and long-term attachment of farmers to arable land. Foremost, this applies to olives, grapes, and almonds. In contrast the department is far more interested in promoting annual field and vegetable crops.”<sup>277</sup> Halabi made a related argument in his study of land alienation in the West Bank. He gave the example of Military Order 1015 of 1982, which required farmers to gain “written permission” in order to plant tomatoes and eggplants in the Jordan Valley, grapes and plums in the entire West Bank.<sup>278</sup> He astutely noted, “This order was issued to plan agricultural production, but it is used to prevent expansion of cultivation of land designated as state domain by the authorities because it is uncultivated.”<sup>279</sup>

Benvensiti’s West Bank Data Base Project reports reproduce the claim that Palestinian farmers have been forced into practicing rainfed agriculture by Israeli

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<sup>276</sup> Another salient example: “Excessively rough topography, which severely impedes the pace of technological change and poses a low ceiling on productivity.” (H. Awartani, 1982, p. 345)

<sup>277</sup> He also notes in a footnote on the same page: “All pest control demonstrations for olives have been stopped since the early seventies; distribution of seedlings requires approval by senior officials; seed oils and Spanish olive oil are permitted in at concessional terms” (H. Awartani, 1982, p. 130)

<sup>278</sup> (Halabi & West Bank Data Base Project, 1985, p. 14); Also see (Rabah & Fairweather, 1993)

<sup>279</sup> (Halabi & West Bank Data Base Project, 1985, p. 14)

policies.<sup>280</sup> One particular instance is particularly significant: “It is clear that West Bank farmers are being forced to maintain extensive rather than intensive agriculture and to develop traditional agriculture branches. The fact that they must rely almost exclusively on rainfall puts them at the mercy of climatic conditions.”<sup>281</sup>

In these examples we see a convincing explanation of biophysical limitation that assumes rainfed agriculture to be little more than a product of biophysical circumstance and unjust policies of the Israeli government in the West Bank. This economic argument no doubt speaks to crucial factors for the persistence of rainfed agriculture. However, this position as we will see later overlooks the agro-ecological materials and processes by which the situation of rainfed farming came to be.

A second, more progressive position emerged during the 1990s in the wake of new interest in agro-ecological farming practices. In 1998, the Palestinian Agricultural Relief Committees (PARC) undertook a major study of local agricultural knowledge among Palestinian farmers in the West Bank. Three agricultural towns were chosen to represent several agricultural systems. The study was carried out over two years by researchers and agronomists from PARC and supervised by a leading agronomist, Ismail Daiq, who helped to found PARC and later shepherded it into a major player in the Palestinian NGO scene. The results of the study eventually emerged in the publication of Daiq’s 2005 doctoral thesis at the Humboldt University of Berlin. Daiq’s goal was to “better understand the problems of Palestinian agriculture, and to analyze the related knowledge systems.” Interestingly, the study focused not on more fashionable aspects of

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<sup>280</sup> (Benvenisti, Abu-Zayed, & Rubinstein, 1986; Benvenisti & Khayat, 1988; Benvenisti, 1984a)

<sup>281</sup> (Benvenisti, 1984b, p. 14)

agronomic science, but rather on ‘local knowledge’ about rainfed production, a longstanding practice in Palestine. According to Daiq, this practice had seen a major decline in the West Bank because of “various policies of occupation” and the dependence of the Palestinian agricultural economy on Israeli markets<sup>282</sup>. Thus, rainfed farming “was of no interest to Israeli farmers, government, institutions or even the Israeli private sector.”<sup>283</sup>

Daiq’s study set about to remedy the lack of technical information about this production method through a study of the ‘local knowledge system.’ Published in English, the research “aims at empowering Palestinian farmers by enhancing their access to such information which is required for improving their production.”<sup>284</sup> The authors noted that a database would be created for farmers to access more detailed research results, “We hope that Palestinian farmers will be encouraged to continuously exchange their experience and knowledge with researchers, and that the recommendations emerging from this process will help them to achieve best results.”

Palestinian agricultural extension materials such as this are part of a longer tradition that began in the early 1980s after oppositional movements formed in the West Bank to supplant Israeli state programs in the arena of agriculture with local Palestinian organizations. The Israeli programs, from the start of the Israeli occupation of the West Bank, were criticized for funneling funds into high-tech production methods that increased Palestinian rural reliance on Israel for synthetic fertilizers, machinery, irrigation

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<sup>282</sup> (Kurzm, 1997, p. 1)

<sup>283</sup> (Daiq, 2005, p. 2)

<sup>284</sup> (Daiq, 2005, p. 1)



equipment, pesticides and herbicides, seeds, and markets. These critics argued effectively that this reliance, coupled with the massive influx of Palestinian rural people as labor in the Israeli service and construction industries beginning in the 1970s, had left Palestinians increasingly vulnerable to the Israeli government.<sup>285</sup> Groups of professionals like agronomists, scientists, and physicians, many of whom were recent graduates of Soviet-bloc and Western universities, formed committees of volunteers to provide free agricultural and medical assistance to Palestinian towns and villages in the West Bank. Today these organizations count as some of the largest institutions in the Palestinian West Bank after modest beginnings as popular committees in the early and mid-1980s.

The strategy of the committees in the early 1980s was technical extension support for modern agricultural production.<sup>286</sup> With this effort came a proliferation of publications. Trained in highly technical disciplines, many of these professionals sought to document and disseminate technical information in their respective areas of expertise. Themes included plant protection, chemical use, pest management, soil fertility, irrigation, and even tree pruning. However, this strategy later developed into a new focus on sustainable agricultural methods, and those organizations turned to what they deemed ‘traditional’ farming practices for insights. For example, Daiq and Sarsour of PARC argue that older practices offer guidance for more sustainable land use, “Traditional knowledge in Palestine, especially in rainfed crops, will beget practices that fit with environment and fulfill the principle of sustained land utilization. This is evident and manifested in farmers' practices pertaining to pest management and maintenance of soil

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<sup>285</sup> (Tamari, 1981)

<sup>286</sup> (Abu-Sada, 2009; Robinson, 1997)

and water.”<sup>287</sup> Illustrating the more explicitly politicized nature of this discourse, they make the important point that, “Politically, farmers protect huge amounts of land from confiscation by the Israelis by reclaiming and cultivating it. They continue to cultivate the land and plant it with different kinds of vegetables because this food will be the only resort when crises occur.”<sup>288</sup> These states show a shift of narratives from earlier economic explanations for the persistence of rainfed agriculture to rainfed cultivation as a kind of national responsibility used to support communities and protect land from confiscation.

More rigorously researched examples of this argument come from the Arabic-language oeuvre of George Kurzom. Kurzom generally aims to show how a strong independent Palestinian agricultural economy, based in ecologically-sound methods, is the basis for persistence on the land. He argues as much in this 1997 example:

Indeed ‘modern’ agricultural practices have eroded many wise traditional agricultural practices that our farmer grandfathers developed over the generations, through their experience and intelligence. These practices have been confirmed by the test of time that they are healthy and more productive than the ‘modern’ agriculture that has led to the deepening of dependency of farmers and their enrollment in loans, and has caused deterioration of soil fertility and other intractable crises.<sup>289</sup> (*My translation*)

This passage offers many opportunities for reflection, but it is consistent with the theme in this and other works by a generation of technically trained experts who sought to

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<sup>287</sup> (Daiq & Sarsour, 2002)

<sup>288</sup> (Daiq & Sarsour, 2002)

<sup>289</sup> (Kurzom, 1997, p. 2)

return Palestinian agricultural practices to more ecologically-sound bases in traditional production systems. A theme for many of these authors is the unsustainable dependency on Israel through the introduction of intensive capital-intensive production. Thus for Daiq, Kurzom, and others the important task of maintaining rainfed production involves the documentation and support of traditional practices to increase farmers' independence and self-sufficiency.<sup>290</sup>

Have we exhausted the features of rainfed production's durability and persistence? What combination of biophysical forces enables this process? The authors we have considered in this section do on occasion hint to a deeper relationship with the land. A good example comes from Awartani's study of rainfed production, which maintained a strictly economic analysis throughout. However, he digressed when noting that if rainfed farming were measured on "purely economic terms" then farmers would be better off to leave agriculture for jobs in Jordan or the Arab Gulf. He states, "this has not been the case, partly due to an intrinsic attachment to land, and partly due to the notably efficient mobilization of labour and capital inputs which have low alternative investment possibilities".<sup>291</sup> However, despite their valuable critiques in the register of either an 'economistic' frame of analysis or the 'self-sufficiency' frame, scholars have overlooked how biophysical characteristics enable the persistence of rainfed agriculture.

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<sup>290</sup> (Tamari, 1991)

<sup>291</sup> (H. Awartani, 1982, p. 412); Other examples include: "There is better alternative for exploiting West Bank rocky hills, whether from an economic point of view or in the light of their favourable impact on soil and water conservation. Furthermore, tree culture imposes less strain on the technological aptitude of peasant farmers and also leads to a deeper attachment between farmers and their land." (H. Awartani, 1982, p. 372)

### SECTION III: VEGETATIVE EQUIPMENT FOR PERSISTENCE

What about the material ecological and biophysical properties of rainfed production? In contrast to a handicap, does the volatility and diverse habitats of rainfed production give them forms of recalcitrance? Here I take up the concept of recalcitrance from Michel Foucault's essay, 'Subject and Power', via the work of Timothy Mitchell.<sup>292</sup> Writing on recalcitrance, Mitchell argues, "The forces of nature, isolated in the laboratory, the glass house, or a gorge at Aswan, can be more easily observed, manipulated, harnessed, described, and represented. But their representation is not a mere cultural construction, for the same forces retain their enormous power to refute what is said about them, escape the mechanisms of control, or produce surprising and unanticipated actions."<sup>293</sup> Attention to the recalcitrance of natural forces, then, offers an alternative account of the durability of rainfed agriculture. Rainfed farming's volatility, unpredictability, and radically localized ideal production make it difficult to impose discursive regimes of representation upon it.

There are several sources of this kind of recalcitrance that are unique to rainfed farming practices. Scholars overlook how the processes *themselves* provide a kind of infrastructure or equipment for the emergence of notions of belonging. I will next detail some of these processes. I do not attempt an exhaustive catalogue but rather some concrete examples that emerge from observation of West Bank agriculture and through gaps in academic studies. In the studies these processes are not only shortchanged, but are also often considered obstacles to development. I argue that nonhuman forces and

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<sup>292</sup> (M. Foucault, 1982; Mitchell, 2011a)

<sup>293</sup> (Mitchell, 2011a, p. 271)

processes must be included in this narrative because it is an integral part of a farmer's conception of being. The way that the composition of biota comes to play a role in the development of political being emerges from the features of rainfed farming itself.

First, reproduction processes of certain plants have important effects on cultivation. It is claimed that one of the most successfully 'modernized' crops in the West Bank is a seedless, small, thin-skinned cucumber that is a staple in the diet of people all over the Middle East. Local seed varieties were historically grown in an open field and pollinated by wind and insects. However, in the 1940s Israeli plant breeders created a stable variety by breeding into local seed stocks resistance to two forms of mildew into local landraces from Japanese and Indian cucumbers.<sup>294</sup> The resulting family of varieties (known as 'Beit-Alpha') was bred from the line of *Cucumis sativus* var. *antasiaticus* to be seedless and exclusively greenhouse-grown. Cucumbers are commercially successful around the world in industrial-scale production thanks to rainfed farming's versatility and the intensive marketing efforts of the seed companies. When this production system was introduced into the West Bank by the Israeli agencies, it happily met a growing demand for year-round cucumbers in the local community. However, this switch had important effects. The new hybrid cucumber was parthenocarpic, meaning that its seedless fruit is produced without the fertilization of the plant, essentially skipping the reproductive process and producing a seedless fruit. Subsequently, this meant that all of the plants in a given greenhouse in the West Bank, rather than being relatives, were clones of each other. The disease and pest pressures of having a crop of genetically identical plants

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<sup>294</sup> (Davidi, 2009)

confined now to a humid and warm greenhouse environment meant that the plants had to be sprayed with fungicides every three to four days. Also, the other trappings of intensive greenhouse production, fertilizers, piping, tubing, plastic sheeting, nozzles, pumps, and the ever-expensive water for irrigation meant that this production was massively capital-intensive, shifting the risk in the case of unsubsidized Palestinian farmers producing for the subsidized Israeli market entirely to West Bank farmers. The massive chemical applications, threat of crop disease, soil salinization from irrigation, market volatility from closures, and dependence on Israel (the occupying power) for all of the equipment and inputs meant that such greenhouse production was a risky venture. Many farmers locked into this production system were unable to pay off the initial investments.

However, a fellow cucurbit and distant relative of this hybrid cucumber offers another account. The fruit, known locally as *fakkous* (*Cucumis melo* var. *flexuosus*), is a light green, cucumber-like member of the melon family,<sup>295</sup> eaten during the summers and prized for its juicy crunch. It enjoys a lucrative local market and, ironically, an even more lucrative market if Israeli vendors appear in the rural wholesale markets of Halhul and Hebron. There are several varieties in Palestine and preferences align along regional biases. Some are known by color, whereas others are named for places, such as the *sahouri* from the town of Beit Sahour. In fact, throughout the West Bank, *fakkous* seeds are only available from other farmers and small farm shops in rural areas. However, the *fakkous* does not abide by the conventions of intensified irrigated production. It is a very rugged plant that is open-pollinated by wind and insects and known for its climbing

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<sup>295</sup> It may be known in English as ‘Wild Cucumber’ or ‘Armenian Cucumber’ though appearance, texture, smell, and flavor vary by region. It is also popular in Turkey, Lebanon, Syria and the wider region. A basic botanical information sheet is available here: (Stephens, 2012).

ability. Fakkous *cannot* be grown successfully with pesticides, artificial fertilizers, and perhaps most interestingly, irrigation. It's believed that the varieties of *fakkous* grown in Palestine are so adapted to chemical-free rainfed cultivation that the plant will not bear fruit if irrigated. It is said that under irrigation, it will have impressive growth, but for unknown reasons, the plant will not give fruit. As such *fakkous* seed is traded locally, informally and it is grown in early spring to take advantage of soil moisture following winter rains. Its only production costs are labor and seed, which is often kept by farmers from the previous season.<sup>296</sup> Especially in the southern West Bank districts of Bethlehem and Hebron, the crop is widely cultivated and is an important source of income for farmers for the summer months.

There are at least two factors in this comparison between two relatives, hybrid cucumbers and the *fakkous*, that deserve attention. First, the reproductive process of the plants themselves comes to have important effects. In the case of the hybrid greenhouse cucumber, which is a main crop in Palestine today, the parthenocarpic reproduction without fertilization and its chemical inputs negatively affects the flavor and texture. Open-pollinated crops like the *fakkous* have a distinctive and lucrative market advantage. Some evidence indicates that there is a relationship between hormones released in the reproduction of plants (e.g. to attract pollinators) and flavanoid complexes that have a host of effects on the plant, including its antioxidant activity.<sup>297</sup> Thus the flavor, texture, nutritional value, and structure of the fruit are altered by modifications to its reproductive cycle by the greenhouse production of hybrid cucumbers. This has been a theme of

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<sup>296</sup> (Mohammad S Ali-Shtayeh & Jamous, 2005; Mohammed S Ali-Shtayeh & Jamous, 2006; Iseed, 2010)

<sup>297</sup> (Newton et al., 2011, p. 163; Schijlen, Ric de Vos, van Tunen, & Bovy, 2004; Vaughan, Geissler, & Nicholson, 2009, p. 219)

writing in Arabic on the flavor and value of vegetables. The better flavor of non-parthenocarpic fruits was discussed in a 1994 report on rainfed agriculture in Palestine.<sup>298</sup> Nassar also commented in 1927 that the higher price of apricots is because they are “better than those of irrigated areas”.<sup>299</sup> Second and more importantly, the structure of greenhouse production rearranges flows of capital, equipment, seeds, chemicals, water in a highly concentrated fashion. This realignment of materials is one-directional as Israel restricts the production and import of farm equipment in the West Bank. Thus, in order to enter into this production system, the flows of materials required emerge directly from the set of power relations between an occupying power and an occupied people. Both the materials required and the primary market for this system rest in important ways on the volatile relationship between the Israeli government and Palestinian producers. However, the biological and chemical properties of the *fakkous* that affect its market value and growth pattern give it a certain grip on the land dictating where and how it is grown.

A second example comes from the most widely cultivated plant in the West Bank; the olive tree. It has been shown above that the planting of olive trees in recent years is in part the product of increased confiscation of land by the Israeli government. Scholars have noted that the “presence of a tree coverage could help complicate and impede Israel's settlement policies”.<sup>300</sup> We will discuss the topic of visibility, trees, and land rights in great length in the next chapter, but how does a tree complicate the process of

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<sup>298</sup> (ARIJ Applied Research Institute-Jersusalem, 1994) ;

<sup>299</sup> “And the people of Nazareth are able to say much more than that, with regard to the ba'ali apricot trees, the value of the fruit of one of these trees ranges this year between 50 and 300 Egyptian *qirsh*. This indicates that trees domesticate dry areas and their fruits in that land are better than those of irrigated land and humid areas” (My translation).(N. Nassar, 1927, p. 164)

<sup>300</sup> (H. Awartani, 1982, p. 372)



confiscation? The olive tree is an extremely hardy and rugged plant. It requires little care for survival. For the highest yield under intensive production irrigation, fertilizers and chemicals, and severe pruning are used. However, in the practices employed for the care of olive trees in the West Bank, the tree persists by its own impulse of life. Olive groves are generally plowed twice at most, but often not at all. Historically intercropping with cereals and small grains was common practice.<sup>301</sup> It is only at harvest time when the trees are picked and attended. This was a source of concern for agronomists as to the ‘neglect’ of the trees, but Nassar saw it another way in 1927:

What else explains the success of olives in Palestine in spite of the little attention paid to them as well as the success of almonds and the other trees by their own grace in Nazareth, Mount Nablus, and Houran, all of which is conclusive evidence of the feasibility of the success of planting trees in dry areas.<sup>302</sup> (*My translation*)

Thus, in the hardiness of the tree, its remarkable capacity for drought and disease tolerance, lies the capacity for agricultural life on much of the cultivated land in the West Bank. In addition to other driving motivations discussed above, perhaps this remarkably rugged biophysical capacity also helps to explain the increase in olive tree acreage from 53,700 hectares in 1966 to 90,000 hectares in 2006, when other major crops saw significant declines.<sup>303</sup>

Third, the interaction between particular varieties of plants and the microclimates that provide the ideal growing conditions is highly localized. For example, many local

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<sup>301</sup> See (Kurzom, 1997, pp. 7–15) for an interview with an elderly farmer in the Ramallah district.

<sup>302</sup> (N. Nassar, 1927, p. 164)

<sup>303</sup> (Assaf, 2010, p. 200)

varieties of native wheat in the hill region of the West Bank developed with lower amounts of rain than varieties developed in other areas, especially northern Palestine. This results in highly variable success of high-yielding varieties of wheat. In the early days improved hybrids developed by the Israeli government and companies came as a package with reduced costs of synthetic fertilizers. However, because some areas inevitably receive higher amounts of rainfall than others, sensitive relationship between yields and the moisture-based uptake of phosphate-based synthetic fertilizers often is vulnerable to minor climatic differences. This fact restricts the production of wheat, among other crops, to highly localized areas and sub-regions in the West Bank.

In 1967 Israeli agricultural experts transformed the agricultural practices prevalent in the West Bank. The Israeli ministries boasted of the modern advances made in the West Bank in a flood of translated English language reports that aimed to illustrate to the world the benefits of Israeli administration.<sup>304</sup> However, frustrations emerged among Israeli Ministry of Agriculture staff soon after taking over the West Bank. Officials voiced these frustrations in more academic reports intended for smaller circulation.

For example, field scientists and extension agents were particularly flustered by cereal production. Their plans for introducing high-yielding wheat had run into some unforeseen complications. For decades, Israeli agronomists had been breeding wheat varieties from local cultivars and landraces found before the arrival of European settlers and crossed improved strains to boost a number of desirable characteristics like yield,

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<sup>304</sup> (Coordinator of Government Operations in the Administered Territories, 1972; Ministry of Agriculture, State of Israel, 1970, Ministry of Defence, 1969)

pest and disease resistance, and drought tolerance. Long the basis of agricultural livelihood in Palestine, endless local varieties of wheat were found in farming villages. Moreover, wheat's landrace or wild relative, wild emmer, is found in the hills of northern Palestine indicating its origin and development in the Fertile Crescent. This produced a massive diversity in the genetic pool of the species where it had adapted to the microclimatic conditions found in various villages depending on rainfall, elevation, temperatures, soil types, pests, and diseases among other factors.

When Israeli experts began to conduct field experiments in the West Bank hilly regions, they described two central problems with the improved varieties of wheat they had been growing in an industrial, chemical-intensive way on the plains areas of Israel.<sup>305</sup> First, because the rainfall was lower, the high yielding varieties were not responding to the synthetic fertilizer applications because they require high moisture levels for chemical uptake. The authors stated, “the local varieties are better adapted to adverse growing conditions than the improved varieties with a high yield potential.”<sup>306</sup> Second, because much of the wheat in the West Bank is grown in rugged hill areas, mechanized tillage was not possible, and this delayed planting until the soil was moist enough for draught animals, thereby not giving extra time often required by the high-yield varieties. The difficulties were expressed in plain language; “improved varieties have no advantage over the traditional ones in the ensuing shortened growing season”.<sup>307</sup>

A 1980 study expressed the frustration of officials and implied that modern wheat

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<sup>305</sup> (Itzhak Arnon & Raviv, 1980)

<sup>306</sup> (Itzhak Arnon & Raviv, 1980)

<sup>307</sup> (Itzhak Arnon & Raviv, 1980)

production in such ‘marginal’ areas impractical and likely to disappear.<sup>308</sup> As we have seen in the preceding two chapters, this view follows in a tradition of scientists working within Zionist agencies of isolating a single variable such as yield potential as the sole metric of evaluation for local agriculture. Such a narrow scope of measurement obscures many other practices and processes related to cultivation, which we will return to later in this chapter.

These kinds of details emerge only through attention to the materials and flows that give rise to the situation of rainfed agriculture in the West Bank. Conventional accounts stop short of a discussion of the seeds, biological processes, topographies, and practices, relegating them, at best, as obstacles to the modernization of Palestinian agriculture.<sup>309</sup> But a focus on the material aspect of the question of rainfed farming practices in the West Bank offers another vantage point to consider how more-than-human relationships constantly reshape the question of cultivation. Only with this perspective does cultivation come into view as an embodied practice, based in the experiences of the kinds of experimentation of farmers described above. They all furnish a certain productive difference that can provide the friction to drive particular claims of belonging and understanding of being. I argue that certain biological, reproductive, and geomorphological properties of rainfed production give it both qualities of durability in sustaining an attachment to farmland and are productive of conceptions of political being that are not easily read through the grid of state logics.

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<sup>308</sup> (Itzhak Arnon & Raviv, 1980)

<sup>309</sup> (Mitchell, 2011a)

*Interlude on Political Practice of Cultivation*

Here I pause for a moment to consider a related point made by James Scott. In his engaging 2007 title, he outlines a theory of “escape agriculture” in which highland peoples of Southeast Asia deploy strategies of cultivation to evade enrollment into state projects. One of the primary vehicles of this enrollment is paddy-based wet rice cultivation, which brings with it a host of political and social technologies of governance. While the work offers several fascinating avenues of exploration, my position departs in an important way from Scott. Scott describes ‘Zomia’ both as a Southeast Asia region and a concept at the geographical margins of state control. For Scott, Zomia is a ‘non-state space’ that invariably involves the capacity for flight and escape by subaltern groups from elite rule. Yet how are we to think about ‘Zomia’ in Israel/Palestine? In contrast to Zomia’s mobility that is enabled by the practices that Scott describes, the process of active Israeli dispossession forces Palestinian farmers to resort to geographical fixity – of territory and livelihoods – as an expression of contestation and moral commitment to the land. In the case of my study, rainfed farming is not somehow apart from the relations of domination and inherent to dominant political order of colonialism in Palestine, but rather an emerges *through* the relations of domination and power to produce an alternative political horizon. Such a politics of substantiation does not perform to script of state territorialization like private property, but names a relation of belonging and attachment that disrupts the system itself. Despite the impressive catalogue of practices, these practices are made to stand apart from the state technologies of rule brought to bear on them. Here, in contrast, we have come to see them as constitutive of modes of political

being but not necessarily aspiring to the state form.

#### **SECTION IV: RAINFED FARMING AND BELONGING**

Among the most incisive and astute observers of the dynamic, embodied practice of Palestinian cultivation was Hassan Mustafa. While he does not directly address rainfed farming (in fact his home village of Battir is known for its ancient irrigation system), his works nevertheless offer an opportunity to connect the question of belonging to the practices of cultivation described above. His works are little known and largely unavailable in Palestine or abroad.<sup>310</sup> Born in 1914 in the Jerusalem-area village of Battir, Hassan Mustafa studied at the American University in Cairo, graduating in 1935 with a degree in sociology. A driven man of formidable intellect, Mustafa was best known in Palestine for his work building the Palestinian rural cooperative movement, but he was actively involved in educational spheres in Palestine until his exile to Iraq by the British Mandate authorities in 1938 with several other prominent Palestinian intellectuals<sup>311</sup>. His tenure at a teacher's training college in Baghdad proved to be a formative experience for him as an Arab nationalist. Upon his return to Palestine in 1941, he worked with the eminent Palestinian educator and intellectual, Khalil Sakakini, at Sakakini's school *Al-Nahda College* in Jerusalem. However, Mustafa's rural origins and continued interest in peasant livelihood from his home base in Battir set him apart from most of his fellow nationalist educator-intellectuals. It was precisely this vantage point that afforded him a

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<sup>310</sup> I am particularly indebted to descendants of Hassan Mustafa, Nadia Botmeh and Samia Botmeh, for generously sharing information from their family records.

<sup>311</sup> (Botmeh, 2006, p. 30)

novel approach.

In 1945, Mustafa published *Khatarāt Rīfīyah* (Rural Reflections), a collection of essays on rural life based on his travels and conversations with Palestinian villagers.

While he does not detail his travels in the manner of a travelogue, his essays nevertheless operate as field reports or observations. He describes meeting shepherds, farmers, observing various local religious holidays, and living peasant life.

### *On land, belonging, and validation*

One of the most fruitful early articulations of Palestinian nature comes in Mustafa's opening essay, "*al-Hawiyyah*" (Identity)<sup>312</sup>, which explores the relationship between rural people, nature, and belonging. He argues, "Perhaps the first manifestation of this connection between humans and nature is the establishment of the human in relation to the land that he is attached to."<sup>313</sup> Crucially, he distinguishes between identity 'in the tradition of the law' and identity 'in the tradition of the villager':

The first identity indicates a name (*ism*) and some of its features, and the second identity indicates a settling and establishment (*ithbāt*) of a presence on the surface of the Earth within a certain limited area (*nitāq*). Then establishment (*ithbāt*) of identity for the villager carries the meaning of affirmation/substantiation (*ithbāt*) of his person (*shakhsahu*), not his image (*ṣuratahu*), on a particular parcel of land not on a piece of paper. Thus the definition of his identity is given through his

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<sup>312</sup> *Hawiyyah* in English is understood as identity, but also as nature or essence.

<sup>313</sup> (Mustafa, 1945, p. 9)

person and his land and is endowed value by how he leaves his impression upon that patch of land that embraces him. From here comes the saying: ‘He who does not have land, does not have identity.’<sup>314</sup> (*My translation*)

Mustafa’s essay argues that the recognition of one’s being is made possible only through the establishment (*ithbāt*) of one’s presence on the land. While a cursory reading sees his concept of identity as conventionally essentialist, we might also see a similarity between establishment and embodied practice. He draws a distinction between recognition of identity through ‘*ism*’ or name, and identity through ‘*istiṭān*’ or settling, dwelling. Mustafa believed that one’s relationship to the land is constantly re-formed through the practice of tilling, planting, and reaping of the land. This notion of being, according to Mustafa, emerges through effort upon the land because the “relationship with nature does not know leniency, for nature’s laws apply to that relation and whosever’s work is connected to it quite validly does not receive mercy”.<sup>315</sup> Thus, in contrast to an abstract legal right (as Mustafa puts it, “a photograph attached to a paper”), Mustafa argues that the link is established by responding to the land’s invitation to inhabit and work it. He makes this argument contrasting several times these two senses of the word ‘*hawiyah*’ or identity. Crucially, he rejects an abstract concept of belonging that is granted through the law by claiming that belonging cannot be endowed or revoked, only measured by how a person “leaves his impression on the land that embraces him.”<sup>316</sup> This embodied,

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<sup>314</sup> (Mustafa, 1945, p. 10)

<sup>315</sup> (Mustafa, 1945, p. 10)

<sup>316</sup> (Mustafa, 1945, p. 10)



instinctual response to the invitation from the land transcends modern efforts to know and thereby dominate it, because it is a responding that seeks to tend to ongoing processes.<sup>317</sup>

In opposition to attempts to codify abstract belonging, he draws attention away from abstract belonging to a concrete sense of *how* one belongs to and knows the land, how one treats the life-giving force of the land.

Mustafa describes a conversation with an old farmer (*shaykh*) later in the volume he lays out most clearly his understanding of activity required to be in ‘harmony with nature.’ The conversation develops his notion of belonging by inhabiting the land, which in turn means to work the land. The *shaykh* tells Mustafa:

This labor, my brother, does not know equivocation. If you plant you will reap; there is no middle way and no alternative or hypocrisy. Nature is merciless, oh brother. The land demands tilling, not prayer. And the furrows of tilled soil demand seed, not ruse or deception, and seeds demand water, not mirage, and the harvest demands all of this effort which you see before you.<sup>318</sup> (*My translation*)

However, he qualifies this apparently narrow notion of belonging by showing how the opportunity to belong and benefits from belonging are open to anyone regardless of their social standing:

*Shaykh:* It is as though the forces of nature and the forces of a new village, where

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<sup>317</sup> Here there are resonances with the first sense of Heidegger’s ‘building’ which stems from a caring or a preserving that “tends the growth that ripens its fruit of its own accord” (Heidegger, 2001, p. 145).

<sup>318</sup> (Mustafa, 1945, pp. 85–86)

everyone works together, cooperatively and honestly, to produce this fruit with the aid of the Almighty. *Mustafa*: What Fruit? *Shaykh*: It is the blessed fruit that all people enjoy with us regardless of their social status.<sup>319</sup> (*My translation*)

This notion of being-in-common through inhabiting the land and care for creation ‘knows no mercy,’ yet it includes both human and nonhuman in the production of a yield that is held in common<sup>320</sup>. However, Mustafa argues that modern conceptions of agricultural production are rendering the vocation of agriculture ‘outdated.’ As such, some seek to improve the farmer and reorganize his lifestyle and practices. Mustafa offers an incisive remark from the shaykh character:

*Shaykh*: You see the *fallah* becomes a standard and another source of pride; people act hypocritically when they position him as a master, and sometimes they neglect him and position him as a servant, yet the fallah knows better. He says this about himself: "I am the servant of the land and master of the field, servant of the people but master of myself."<sup>321</sup> (*My translation*)

On one level, the ‘advice’ coming in those days of the British Mandate especially was that the farmer needed be brought up and improved. Mustafa seeks to show the hypocrisy felt by the farmer who through his practice understands the stakes of the agricultural

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<sup>319</sup>(Mustafa, 1945, p. 86)

<sup>321</sup>(Mustafa, 1945, p. 87)

vocation better than an expert. However, the more profound insight from Mustafa is that the farmer's practice produces his identity or political being, which constantly emerges but does not seek validation through external abstractions like the law. After all, the farmer is the master of himself but servant of the people. Here Mustafa's notion of being is at once an affirmation of his individual freedom but held in tension with his responsibility to being-in-common. Despite his somewhat conservative approach to identity as read through today's understanding of a loaded term, Mustafa offers us a powerful reading of being and belonging that emerges through concrete practice and not juridical abstraction. While he does not directly address the issue of rainfed farming, Mustafa reveals a sophisticated and open understanding of attachment and belonging through the practice of cultivation. Mustafa's notion leaves the nature of political being an open question, answered in the embodied practice of dwelling and cultivation rather than the legal realm of private property and rights. When put into conversation with Nassar's emphasis on rainfed farming and cultivation for protection of the land from appropriation, Mustafa offers a powerful extension, arguing that achieving legal rights does not exhaust our understanding of belonging. Rather, he notes that it is only through the embodied practice of dwelling and cultivating that a sense of belonging is constantly re-made and re-secured.

## SECTION V. CONCLUSION

This chapter has explored the historical linkages that illustrate longstanding interest in rainfed agricultural practices. Rainfed agricultural systems have been debated and identified by Palestinian intellectuals, often drawing conclusions about their importance for maintaining a presence on the land. Contrary to current economic accounts of the decreasing viability of rainfed farming, I have shown how these agricultural practices were believed by authors dating as far back as the 1920s to enable forms of political being-in-common that strengthens attachment to the land without necessarily culminating in a state form. Crucially, the promise of rainfed production emerges out of what is conventionally understood as its handicaps. More specifically, its volatility, the recalcitrant qualities of its component parts, and the unruliness of its localized production afford rainfed agriculture its durability. It is a practice that enjoys remarkable durability and exploring how that was made enables us to explore how concrete notions of political being emerge out of the process. Exploring the work of Nassar and Mustafa in conversation with other accounts of rainfed farming illustrates the ways that such practices are taken up and understood to embody more durable attachment to the land. The next chapter explores forms of political being that emerge from cultivation practice.

## **Chapter 4: Cultivation and Infrastructures of Recalcitrance**

Tree saplings, or *gharsāt*, are not visible from just any distance. Small animal pens, likewise, come into view only in close quarters. But when militarized, heavy, construction equipment from the Israeli Civil Administration and parks authority comes to raze a feature deemed to be offending, all becomes clear. It makes for a most incongruous scene: soldiers versus sheep, saplings versus heavy equipment. The area is located within an official nature reserve, and cultivation is not permitted, the farmer is told. The deed done, the soldiers and equipment recede. Such episodes repeat often in the violent engagement of Palestinians and Israeli government agencies in the West Bank. Even in an encounter's wake, little is visible from a distance: a disfigured field, a military order, a map, broken stalks, shredded plastic sheeting. The highland spine of the West Bank organizes these encounters topographically among its hills and villages. Palestinians return to replant their groves and rebuild their sheds.

From their singularly high-altitude perspective, maps of the Palestinian West Bank exhibit a dizzying fabric of color, shape, line, form, and symbol. Israel's hilltop settlements appear in shades of blue, and Palestinian towns are scattered in shades of brown. Ominous outlines of walls and checkpoints also figure prominently. Some map features have already been built, but many others are only planned. As such, the map provides an important representational space within which to illustrate the ongoing process of material dispossession of Palestinians, whether planned or actual. The West Bank maps have succeeded to some degree in countering dominant Israeli narratives of

defense and security by visualizing the material fact of Israeli military control in its various spatial forms. One of most effective and important results has been the illustration of the “Oslo process” categorization of West Bank land into three major jurisdictions: the now-infamous areas A, B, and C. Crucially, the maps show how Area A spaces, under nominal Palestinian control, appear as an archipelago of reservations surrounded entirely by areas under Israeli control. The logics and consequences of this spatial order have been well documented.<sup>322</sup> The map’s satellite view of the world rightly shows how 60 percent of West Bank land has been categorized as Area C, or under “full” Israeli control. This distinction means that all Palestinian construction and cultivation requires approval from the Israeli military. Permits are rarely given. Palestinian homes, fields, cisterns, barns, and roads are frequently bulldozed in these areas. From 1997 to 2009, Israeli government figures cited at least 2,450 demolitions of Palestinian structures in Area C lands.<sup>323</sup> In some cases, such as the one we consider in this chapter, additional categories such as Nature Reserve, provide the juridical basis for evacuation or demolition. These areas provide an especially useful vantage to consider the intersection of agroecological and spatial orders in our wider exploration of *practices of persistence*. The declaration of such reserves, as we will see, has a long history in Palestine that is deeply entangled with the contest over land and legal claims to territory. How are the embodied practices of cultivation productive of novel forms of political being?

To explore this question, this chapter considers how the declaration of state lands

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<sup>322</sup> Much is made of Palestinian resolve (Bardenstein, 1998; I. Braverman, 2009; Irus Braverman, 2008; Cohen, 1993). Even more is made of the Israeli legal and technological structures of control in the West Bank (Azoulay & Ophir, 2012; Gordon, 2008; Weizman, 2007).

<sup>323</sup> (UN-OCHA, 2009, p. 3)

has for ninety years rested on a central distinction: whether the land could be considered “cultivated.” The distinction on state land dates to an older process of land and agrarian reform instituted by Ottoman authorities and continued under the British Mandate that encouraged cultivation and tied parcels of land to individual people. Those reforms introduced the notion that, if land was uncultivated for a particular length of time, it became state land. One of the primary instruments of creating this distinction, as we saw in Chapter 2, was the creation of the Custodian of Absentee Property, whose task it was to manage and classify land based on its agricultural status. The Custodian of Absentee Property and other legal mechanisms illustrate how metrics for the evaluation of agriculture participate in processes of land annexation. Today, the un/cultivated distinction remains one of the most contested spheres of struggle between Palestinian villagers and Israeli authorities and settler groups. It is a battle waged at various registers: courts, bureaucratic mechanisms of measurement, and living organisms on the land. The subtle division between cultivated and uncultivated land is the basis for classifying “private land” and “state land,” which has been the Israeli government’s primary instrument of land appropriation for decades. This land categorization of private land and state land is made to appear separate from political calculation, but it is not separate. More importantly, however, this categorization offers us a way to consider how the concept of cultivation, while related to processes of dispossession as we have seen in previous chapters, also emerges as a site of politics. Embodied practices of cultivation by definition do not derive from a set political program. Rather, political being or subjectivity is made in the process.

Generally, two kinds of explanations of the relationship between private land and state land are offered. The first may be called an “interpretist” position, in which scholars argue that the land tenure law has been implemented incorrectly. From this perspective, critical historians have described the transformation of Ottoman land tenure, beginning with the Young Turk revolution through 1858 Ottoman Land Code (OLC) reforms, as a process of gradual privatization and land alienation. Advancing this premise, recent work in this literature views the 1979 Israeli re-implementation of the land law in the West Bank as violating the intended spirit of the OLC, which placed the burden of proof of cultivation or noncultivation on the state, not the landowner.

The other explanation comes from critical legal studies, through which scholars aim to show how Palestinian and Israeli sides deploy competing historical narratives to “produce” the landscape to their advantage. In this “social constructionist” explanation, Palestinian farmers are locked in a back-and-forth contest of planting and uprooting with Israeli authorities and settler groups. This view contends that parties work the land strategically to more effectively mount court cases.

While both of these explanations have made important critical contributions to the literature on land politics in Palestine, this chapter seeks to build a position distinct from either. Specifically, this chapter does not begin from the assumption that Palestinian agroecological practice and, more fundamentally, the vegetative activity of the land are determined by juridical logics. Certainly, Palestinian farmers, by virtue of their subordinate position in the colonial order, must engage land-confiscation efforts in legal terms. However, to confine Palestinian farming and the life of the landscape to a separate



realm where it seeks only to influence governmental policy grants the law the capacity to determine agroecological life.<sup>324</sup> In other words, the complex of forces both human and otherwise inhabits a register that is deeply entangled with, but not constituted by, the law.<sup>325</sup> Here we return to the second sense of the *zill*-shadow as shelter, in which Palestinian practices of cultivation give form to the potential residing in the landscape and in history, thereby producing new political horizons. The chapter will explore this process in two main sections, using places such as the Wad Qana valley in the West Bank to force reconsideration of juridical bases for distinctions such as cultivated/uncultivated. Section 1 will explore the genealogy of laws and policies aimed at governing cultivation and the declaration of state land. Section 2 will consider the ways that cultivation practices and environmental processes raise questions about the limits of juridical logics.

## **SECTION 1. GENEALOGY OF CULTIVATED LAND**

Starting high in the hill country near Nablus, the *Wad Qana* valley snakes down through the folds of the rugged West Bank hill ridge.<sup>326</sup> It descends through lands where olives, wild oaks, almonds, citrus groves, and figs crowd an unpretentious landscape. It floods violently during a good winter rain. For most of the year it is dry or runs at a trickle near springs. The Qana River is fed by springs along its descent from 600 meters, where it joins the *Nahr Al-<sup>ṣ</sup>Auja* river on the coastal plain and finally ambles into the

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<sup>324</sup> (Mitchell, 2011a)

<sup>325</sup> (Samera Esmeir, 2012; Fakher Eldin, 2008)

<sup>326</sup> ‘Wad’ is Arabic for ‘valley’ and it is redundant to use both Wad and valley for Arabic speakers. However, since ‘Wad Qana’ is the proper name of a place, I will use it and add ‘valley’ for clarity in English.

Mediterranean Sea. Its colluvial-alluvial soils create one of the most prized areas for growing crops in the hill country. The ravine gathers many people, crops, religious sites, trees, and birds along its route from the highlands to the sea. The town of Wad Qana is a small group of houses collected along springs in the valley's lower terraces. The houses are high enough to avoid the occasional winter flash flooding but low enough to easily tend to the groves on the valley floor. The springs organize the village in the valley. The Palestinians who inhabit Wad Qana maintained economic and familial connections to Dayr Istiya, the nearby "mother" village, whose prominent families owned most of the land in the fertile valley.<sup>327</sup> Dayr Istiya belongs to a group of about twenty other villages in the mountain ridge of the West Bank that have become known as *Qura Karāsi*, or throne villages. These villages saw the rise in the nineteenth century of family clans who became wealthy landlords.<sup>328</sup> In the case of Dayr Istiya, the agricultural lands of the village extended northwest into surrounding fertile valleys such as Wad Qana. As is common practice historically in Palestine, families moved either permanently or seasonally into simple homes near their fields. These outlying hamlets, or *izab*, as they are known, were connected integrally into the economic and social spheres of the corresponding villages.<sup>329</sup> Some *izab* such as Wad Qana became villages. Bishara Doumani has shown how the area around Dayr Istiya, which would have included Wad Qana, was a major olive-oil producing region, feeding Nablus' massive appetite for oil

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<sup>327</sup> (Doumani, 1995)

<sup>328</sup> (Arraf, 1996; Amiry & Riwaq--Centre for Architectural Conservation, 2003). For an interesting biography of a leading member of this rural feudal system, Omar Salih, see (Tamari, 2009a).

<sup>329</sup> *izab* are places inhabited most of the year (usually February to November) the families who farm and tend herds of sheep live. The families usually stay back in the village during the coldest winter months. These hamlets have an ambiguous legal status, but locals know their exact location as though they were villages. Suad Amiry and Faris Rahhal's pioneering study, *Manāṭir: qusūr al-mazāriʿ fi rīf Filasṭīn* [Manatir: Farm Structures in Rural Palestine] provides an architectural history of these unique field structures.

for export and soap-making.<sup>330</sup> Hütteroth and Abdulfattah show the impressive base of Dayr Istiya's 5,500 identified olive trees dating to the late 16<sup>th</sup> century Ottoman tax records.<sup>331</sup> Nablus olive-oil soap was exported heavily in the nineteenth century, especially to the Middle East and Europe. Dayr Istiya in particular was known for its grains and oil from olives grown on the steep hillsides.

Cartographically speaking, if there were a list of *lost causes* with respect to restrictions today in the West Bank, Wad Qana would be near the top. By virtue of its entanglement in a complex of land classifications by the Israeli government, Palestinian habitation has become difficult. A detailed map of the West Bank would show the town of Wad Qana ensnared in a matrix of walls, checkpoints, settlements, and other legal restrictions. Four Israeli colonies were built in the immediate vicinity beginning in 1978.<sup>332</sup> In December 1983, the land was unilaterally classified a nature preserve by the Israeli military.<sup>333</sup> This is based upon a classification originally made by British Mandate authorities as early as 1926.<sup>334</sup> In recent times, the first in a string of demolitions began with a family home in 1984. Finally in 1986, the families who lived in the valley year-round were forced out by the restrictions on farming and construction. They moved to the town of Dayr Istiya. Then, during the 1993 Oslo negotiations, the area (as well as all others so designated) was reaffirmed as a Nature Reserve, which kept it off-limits to

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<sup>330</sup> (Doumani, 1995, p. 270)

<sup>331</sup> (Hütteroth & Abdulfattah, 1977, p. 136)

<sup>332</sup> The first four colonies were built in 1978, 1980, 1981, and 1983 (Americans for Peace Now, n.d.).

<sup>333</sup> (Amiry & Rahhal, 2003)

<sup>334</sup> The British Mandate (1920-1948) authorities instituted the Forest Ordinance of 1926, which includes Wad Qana as a reserve (El-Eini, 2006, p. 202). For discussions of this period from varied political positions, see (El-Eini, 2006, pp. 189–153; Tyler, 2001, pp. 154–155). The Palestine Royal Commission maps (1937) include the Wad Qana areas a declared and surveyed reserve.

Palestinians. In other words, Wad Qana's sedimented legal structure leaves it subject to at least two layers of Israel juridical mechanisms—both Nature Reserve and Area C. The Green Patrol rangers of the Israel Parks and Reserves Authority, as well as the army, are responsible for enforcement of cultivation prohibitions. Many Israelis, who are usually also settlers, hike in the valley. Such a hike and swim usually involves heavily armed escorts assigned by the “security coordinator” of a nearby settlement.<sup>335</sup> This is part of a longstanding and increasingly sophisticated project to claim springs and other open spaces in Palestinian villages as recreation areas for Israeli settlers by visiting and erecting park facilities.<sup>336</sup> Wastewater pipelines from nearby Israeli settlements often overflow, dumping wastewater down the valley until the relevant Israeli contact can be marshaled to stop the flow.<sup>337</sup> Soldiers often close the only road Palestinians are allowed to use. Attempts by Palestinians to plant trees lead to demolition orders, such as a recent one in 2012 that condemned more than 1,000 olive saplings.<sup>338</sup> For these reasons and others, Wad Qana appears as a lost cause because it is deeply tangled in this web of state and settler claims.

Yet Wad Qana is an intensely contested space. Despite severe restrictions on planting trees (field crops are generally tolerated), farmers work actively to expand their groves, planting hundreds of olive seedlings each season. The sheltered, lower-altitude part of the valley provides a warm climate for coastal crops, such as citrus. The citrus groves provide a good livelihood for several farm families. These farmers live in the

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<sup>335</sup> This is described in a recent report on Israel takeover of Palestinian springs, see (UN-OCHA, 2012). References to security coordination are also found on this travel guide entry for Wad Qana, (“‘Nahal Kana’,” n.d.).

<sup>336</sup> For a historical perspective, see (R. L. Stein, 2009) and for an extensive recent report, see (UN-OCHA, 2012).

<sup>337</sup> (Applied Research Institute-Jerusalem and Land Research Center, 2012a)

<sup>338</sup> (Applied Research Institute-Jerusalem, 2012)

home village of Dayr Istiya but return each day to the area to irrigate from the plentiful natural springs, to prune, and to harvest. They are now rebuilding older terraces, planting wheat and barley for the first time in years, and regularly spending the night in farm homes (*qusūr*) abandoned since 1986. They have gone on a media offensive, with the mayor's office keeping Palestinian and Israeli newspapers abreast of the demolition orders and facilitating local research institutes to monitor the environmental situation. By personal initiative, locals use mobile phones to capture rough video of field demolitions and post it to online social media. Some local people now speak openly of original families moving back into their homes in Wad Qana from where they had resettled in Dayr Istiya.

### *Shifting Cultivation*

To understand how the situation of Wad Qana emerged, we must explore the dramatic changes in the juridical landscape of the West Bank. This illustrates how both tools of measurement developed in agronomic science and law participate in the appropriation of land. The situation of a village-within-nature-reserve such as Wad Qana is particularly knotted. We will return to the nature-reserve question later. What of the areas where large tracts of land, about 16 percent of the West Bank, have been reclassified as state land? How did they come to be reclassified, and to what ends?

Most recent scholarly analysis begins from the West Bank legal policies of the Israeli government in which it attempts to show that these changes hinge on a 1979 re-

interpretation of the state land laws. As the story goes, from 1967 to 1979, Israel used military orders to seize private Palestinian land in the West Bank. After the so-called *1979 turn*, the state began to reclassify land as state land, based on its reinterpretation of the Ottoman Land Code (OLC) of 1858, Article 78. From its origin the OLC had sought to encourage peasant cultivation of the land, in part to bolster tax revenues. It is important to remember that both Ottoman and British courts, when adjudicating cases dealing with state lands, put the burden on the state to show that a parcel was uncultivated. The Israelis' 1979 reinterpretation inverted the equation, assuming all unregistered land to be state land unless proven otherwise. One of the Israeli officials responsible for this shift said in a 1993 interview, "Basically, the land belongs to the government, or to the state, unless it was given by the state to a person." And later, "Under international law, the government which is occupying a territory has the right and the duty to use government land. It does not have the ownership, but it has the right to use it. It is not meant, under international law, to be for the use of the local population; on the contrary, it is for the use of the occupying state."<sup>339</sup> Crucially, the official reconfigures relations by investing the state with the capacity to endow, validate, or revoke access to the land. This question of land use, specifically cultivation, haunts all discussion of the OLC and its various interpretations over time.

With regard to the state land laws, the question of cultivation is measured on two axes. First, the state assesses the percentage of a particular parcel that is cultivated. This determines how much of the parcel is in use at a given time. Second, the state attempts to

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<sup>339</sup> (Ambrosino & Barnes, 1993) and (Btselem, 2010, p. 25),

ascertain how long a particular parcel has been farmed. According to the Israeli government's reinterpretation, cultivation of a plot of land in the West Bank requires continuous cultivation of at least 50 percent of the parcel for ten years. Through these two axes, one spatial and the other temporal, Israel created a procedure for reevaluation of thousands of plots of land. It was not always this way. The British Mandate Court consistently upheld previous interpretations by the Ottoman authorities that evaluated a plot based on "reasonable cultivation" suitable for the condition of that parcel. In short, less than 50 percent of the plot could be cultivated for it to be considered private. Anyone working land for ten consecutive years acquired it even if they failed to register it or stopped cultivating it after ten years.

In the violent encounters of settler groups and the Israeli state with Palestinian farmers and landowners across Israel-Palestine, legal nuance has major implications. Technicalities can result in the dispossession of Palestinian villagers from parcels, fields, homes, or natural springs. Conversely, Israeli settler groups plant trees to begin establishing claims to cultivation based on the reinterpreted OLC.

Thus, Braverman wonders, making reference to John Locke's famous formulation, "But when two parties claim to have mixed their labor with the same piece of land, how can law enforcers decide which of these claims to prefer?"<sup>340</sup> She describes recent efforts of settlers to perform agricultural intent by planting fruit trees, rather than the pine trees that the Jewish National Fund has planted to claim land for Israeli settlement. This important question, however, obscures the larger issue at work: Only

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<sup>340</sup> (Irus Braverman, 2008, p. 471)

some people are allowed to mix their labor with the land. The law does not stand apart from the sphere of political contestation, simply refining its definition of cultivation. Rather, the law grants some groups the right to mix their labor with the land and denies others. For example, Braverman rightly illustrates the view of a Palestinian lawyer, Sulieman Shahin, who frequently represents Palestinians in land cases in Israeli courts. “In particular, he claims that by restricting the discussion to the single question of whether or not the land has been cultivated for a legally defined period of time, the aerial photos enable the Land Appeal Committee to ignore the conditions that have prevented Palestinians from cultivating their lands in the first place: occupation, closures, settler harassment, and so on.”<sup>341</sup> Unfortunately, the author does not expand on this crucial point being made by Shahin. However, it raises the question of *access to land*, which is integral to our discussion.

Recent scholarship suggests that the Israeli Ministry of Justice’s reinterpretation in 1979, which shifted the burden of proof to the farmer, as a major break with previous Israeli policies.<sup>342</sup> As a few legal historians have recently begun pointing out, 1979 may not have been a major break with regard to the land, as the legal structures toward Palestinians within Israel proper and the West Bank are tied inextricably.<sup>343</sup> However, this point is not connected to the question of *capacity* to mix labor with the land. The historical process of dispossession illustrates the overlooked entanglement of legal definitions of land use with access to the land. The best illustration of this relation is

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<sup>341</sup> (Irus Braverman, 2008, p. 468)

<sup>342</sup> (Btselem, 2002, 2010; Gordon, 2008; Weizman, 2007)

<sup>343</sup> (Irus Braverman, 2011; Forman, 2009; A. Kedar, 2000)



discussion around the origins of the so-called “50 percent rule.”

The expulsion of Palestinians in 1948 left hundreds of villages within the new state of Israel uninhabited. As we saw in previous chapters, the fledgling Israeli state created official bodies like the Custodian of Absentee Property and tasked them with the classification and appropriation of that land. However, some villages in the Galilee remained. This geographic concentration of Palestinians became a matter of considerable concern for the nascent Israeli government. Plans were developed, though juridical mechanisms, to settle Jewish towns among Palestinian towns. In one instance, the state claimed almost half of an area, consisting of 396,000 dunams (97,800 acres) between 35 Palestinian villages in the central Galilee, as state land.<sup>344</sup> This resulted in the seizure of large tracts of land for settlement and illustrated to the Israeli government that the process of determining cultivated areas was time-consuming and slowed its settlement ambitions. It started building on this precedent and, crucially, endowed district courts with greater powers to decide state land cases. Legal historians tend to see this as a break with previous efforts, but they are better read on their own terms as part of a larger process of facilitating settlement.

The court cases that enabled the 1979 legal precedent in the West Bank came from those newly empowered district courts, specifically a series of cases in the Haifa District Court and Supreme Court in the early 1960s.<sup>345</sup> In the cases, judges ruled that most, or more than 50 percent, of a particular parcel of land must be cultivated for the entire parcel to be considered cultivated and thus eligible to remain under private

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<sup>344</sup> (Forman, 2009, p. 681; A. Kedar, 2000)

<sup>345</sup> (Forman, 2009)

ownership.<sup>346</sup> In 1979, the Israeli government began to seek other juridical means of seizing private Palestinian land, building on the legal foundation set in the Galilee. Human-rights groups overlook this historical context in their reports by focusing largely on the present implementation of land laws rather than their genesis over time.<sup>347</sup> Despite attempts to isolate analysis (because of organizational mandate or otherwise) to only the West Bank, the legal experts involved in the West Bank settlement enterprise explicitly drew from this body of law. In a further development of the same logic, this rule was further amended in 1984 to allow for retroactive seizure of land.

As it stands today, according to the Israeli government, the state can take possession of unregistered ‘*Miri*’ land near villages that has not been cultivated for three consecutive years, outlying unregistered ‘*Miri*’ land that has been cultivated for less than ten consecutive years, and ‘*Mawat*’ land, which is less than a thirty-minute walk or beyond where the loudest human voice can be heard from the villages, most of which is grazing land in the Jordan Valley.<sup>348</sup> These are based on the new understanding of the Ottoman-era land classifications, the study of which is extensive enough that it could be considered a subdiscipline of Middle East history.<sup>349</sup>

The “50 percent rule” thus emerged from a historical process of dispossession through the law, beginning as the courts struggled to adjudicate land claims by the

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<sup>346</sup> There is debate about the various influences and powers of different courts here. See (Forman, 2009, pp. 683–685; A. Kedar, 2000). These scholars acknowledge the wider process of dispossession but generally remain within the confines of legal technicalities.

<sup>347</sup> (Btselem, 2002, 2010)

<sup>348</sup> (Btselem, 2010, p. 25)

<sup>349</sup> (Mundy, 2007; Owen & Bunton, 2000); Also, a rash of recent academic work (Irus Braverman, 2011; Gordon, 2008; Weizman, 2007) and policy reports (Btselem, 2002, 2010) have documented and historicized the state-led efforts to confiscate Palestinian land in the West Bank.

remaining Palestinians within the nascent state of Israel. In particular, it shows the conjuncture of metrics of measurement inspired by agronomic science, and legal mechanisms working in the service of consolidation of control over land. This illustrates the limits of recent scholarly work on land politics in the West Bank that clearly gestures to the question of access to land and the history of the 50 percent rule and other precedents but does not connect the two. In maintaining the separation between these processes, we continue to leave unexamined the connections that drive the legal basis for land politics in Israel-Palestine. This is to say nothing of the question of cultivation itself, a deeply contested category that we will return to later, which appears in this literature as an assumed legally circumscribed artifact. Such a stance assumes that both practices of cultivation and environmental processes are driven by legal advocacy. In short, I have tried to show here that, to understand the question of cultivated and uncultivated land in relationship to access to land, scholarship overlooks the material and historical process of dispossession that gave rise to the body of law. This work prefers to retain the law as an abstraction that can somehow stand apart from the processes that enable and sustain the law. In the end, this oversight serves to strengthen the notion that belonging and attachment to land are determined solely through the law rather than through a complex of many forces.

### *Cultivated vision*

As has been pointed out recently, aerial photography has become one of the most important technologies of ascertaining the cultivation status of a particular parcel of land. Israel has taken aerial surveys of the West Bank every other year since 1967.<sup>350</sup> These surveys have been used to reclassify as much as 16 percent of all West Bank land as state land, opening it for use by the state, in Israel's case for settlement. According to pioneering work by Braverman, the main state witness in land disputes before the Land Appeal Committee for the West Bank is a geographer at the Survey of Israel. This research has exposed the methods by which a particular parcel of land can be considered cultivated. The aerial photo analyst said, "You can't really map people. Trees, on the other hand, don't move. People move, but things stay in place. ... Sometimes I spot goats in the aerial photo. It's amazing to see them there. Of course, I don't mark them into the map, because they move. [I only map] existing things."<sup>351</sup> Here we see that aerial photography, as Braverman rightly points out, makes much invisible in the act of making certain things visible. For example, the identity of cultivators and the history of cultivation, as well as the many climatic and seasonal aspects of cultivation, are made invisible in the temporal scale of the photograph. Many questions are raised by this method of determining cultivation. Building from this understanding of the exclusions of aerial photography and technologies of perception, we now consider other efforts to survey Palestine from the air.

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<sup>350</sup> (Irus Braverman, 2011, pp. 179–181; Weizman, 2007, p. 118)

<sup>351</sup> Quoted in (Irus Braverman, 2008, p. 469)

In contrast to research on the geography of the West Bank, technologies of remote surveillance do not originate in the West Bank—but within 1950s Israel proper. In fact, they emerge out of the same process of dispossession followed by massive reclassification of lands in the wake of 1948 we considered in the previous section. In cases discussed above on the “50 percent rule” adjudicated in Haifa the 1960s, Forman has recently shown that the Israeli state used aerial photographs taken during the British Mandate in its survey of 1944-45 to determine whether a particular plot had been cultivated.<sup>352</sup> The massive project of reclassification of West Bank lands after 1979 was made possible by the biennial aerial photo survey beginning in 1967, but those cases depended on British aerial photographs from 1944-45, which in turn depended on other surveys. The deeper history of aerial mapping illustrates the centrality of photographic evidence for legal adjudication on matters of land use.

The aerial survey in fact originates much earlier with a series of colonial powers that surveyed Historic Palestine. A German squadron of fourteen airplanes arrived in Palestine in 1916 to assist with planning an attack to take control of the Suez Canal from British and French forces.<sup>353</sup> Beginning in 1917-18, we have the first aerial images of Palestine courtesy of the German Air Force, whose efforts to photograph British military installations and major transportation grids also provided a wealth of remotely sensed data about Palestine at an early stage of aerial photography.<sup>354</sup> As British and Australian air power improved through 1917 and 1918, it pushed the Turkish-German troops farther

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<sup>352</sup> (Forman, 2009, p. 681)

<sup>353</sup> (B. Z. Kedar, 1999, p. 22)

<sup>354</sup> The Bavarian State Archives have digitized many of the aerial photographs of Historic Palestine during this period, see (“Bildsammlung Palästina,” n.d.).

north, beginning an aerial photography effort of their own. Later, during the British Mandate, the Royal Air Force also extensively photographed the region in 1944-45. This draws attention to the connections between the military aerial surveys and the way those photos were taken up within similar logics for the purposes of dispossession through the law. The two modes of seeing (military-agronomic) cannot be seen apart from each other as we saw in the 1960s court cases in Haifa. Thus, rather than an exception, the aerial surveys after 1967 are profitably understood as part of larger effort.

New insights and forms emerge from unexpected shadows on surveys and maps. These shadows are given expression by human activity on the landscape. They reveal the map's contradictions and oversights. Obscured in the cartographic sophistication today are the estimated 150,000 in Palestinians in about 250 towns who live in places that have been declared Area C and carry on with their lives, work in their offices, work in their fields, pressing through permits and checkpoints to do so.<sup>355</sup> They constantly transgress and defy the map's lines. This is where our discussion becomes less about cartographic representation and more about spatial practice. One could concern oneself with new forms of cartographic representation to address this lack, yet instead we will trace the itineraries of unsanctioned practices.

The spatial order of Israel-Palestine is constantly territorialized on this shifting terrain of cultivation and conservation practices, juridical logics, and spatial regimes. Mine is an attempt to understand how the activity of the landscape becomes visible to the law, how it is perceived by the camera lens and human eye, and how it comes to be

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<sup>355</sup> (UN-OCHA, 2010)

validated. If space is produced through practices both representational and material, then the spaces that Palestinians stage have particular qualities. The production of space requires constant effort to secure and re-secure it as such. In contrast to most accounts, it remains a territorialization process shot through with contradictions and fissures.

Beyond the established subjectivity of the process of aerial photo analysis, scholarship overlooks a more profound question of the adjudication of cultivation itself. The distinction between that which is cultivated and that which is uncultivated is conventionally made to appear absolute. The emphasis on the ratio of cultivated land, the duration of cultivation, and the attending technologies of perception devised to measure the minutiae of these elements obscure larger processes of calculation.<sup>356</sup> It narrows the scope of vision to overlook the question of cultivation itself, namely how and why it is practiced. But rather than new forms of visual representation, for our purposes the more important question becomes: What forces, human or otherwise, inhabit the margins around the technologies of perception of sovereign power? In other words, we seek to understand how certain practices on the land come to be sanctioned and others do not. Section 2 sets about to explore this question, which stands at the juncture of agroecological practice, environmental processes, and articulating spatial orders.

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<sup>356</sup> Scholars of visual culture have consistently drawn attention to the political valences of ostensibly 'objective' photographic modes of seeing, especially from the air (Daston & Galison, 2010; Weems, 2011).

## SECTION 2. UNRULY NATURE

Wad Qana's political-ecological journey starts in the hilly Nablus region, within the Oslo-process classification of Area A, or nominal Palestinian control. It weaves through Israeli hilltop settlements and Palestinian farming towns and into Area B, or ostensible joint Israeli-Palestinian control. For the rest of its journey through the West Bank hills, it remains in Area C, or full Israeli control. The journey at that point becomes classified as a Nature Reserve in a particularly beautiful series of canyon bends, where, amid several natural springs, the town of Wad Qana is located. The river passes by sedimented ruins of Byzantine-era churches, Islamic-era settlements, and Jewish sacred sites built in its hillsides. Leaving the nature preserve, it flattens as it hits the coastal plain, passing under Israel's newly constructed security barrier near the town of Izbat Salman. There, custom-built, securitized culverts are designed to allow water but not people to pass under the wall. Now approaching the massively built-up area of the Tel-Aviv metro region, it joins the Nahr al-Auja River (Yarkon in Hebrew). The river then glides through a huge Tel Aviv city park before it finally tumbles into the Mediterranean Sea at the heart of the urban populated core of Israel. In that journey, it manages to pass through nearly all of the politico-juridical classifications in Israel-Palestine: Areas A, B, C, Nature Reserve, and Israel proper. It passes through the main geographical regions of Palestine, from the bucolic and hilly olive country through the grassy, gentle descents of the Western slopes, finally reaching the humid coastal plain.

The Area A, B, C geographical distinctions dating from the Oslo Interim Agreements in 1993 have become institutions in their own right in scholarship around



Israel's systems of spatial organization and control. Scholars have rightly detailed the ways that Israel territorializes itself through the manipulation and production of space. One of the most astute observers of this mode of colonial production of space in Israel-Palestine, Eyal Weizman, notes that, "The linear border, a cartographic imaginary inherited from the military and political spatiality of the nation state, has splintered into a network of temporary, transportable, deployable and removable mini-synonyms ... that shrink and expand the territory at will."<sup>357</sup> Weizman's innovative deployment of archival materials and his exploration the circulation of ideas and spatial practice within the Israeli government have yielded important insights into the "elasticity" of territory and its manipulation by Israel. He describes the "anarchic geography of the frontier" as "an evolving image of transformation, which is remade and rearranged with every political development or decision."<sup>358</sup> His understanding of the production of space as a process of flows and transformation of space, however, is not granted with the same vigor to Palestinian actions. Early in the book, he does recognize that the colonial spatial order does not retain total control, "...the agency of the colonized makes itself manifest in its success in holding steadfastly to its ground in the face of considerable odds, not only through political violence but in the occasional piece of skilful diplomacy and the mobilization of international opinion."<sup>359</sup> This admission, however, is followed by a detailed expose of the "architecture of occupation" with very little further mention of the fissures inherent to the spatial order or contestations against it. Tamari rightly points out

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<sup>357</sup> (Weizman, 2007, p. 6)

<sup>358</sup> (Weizman, 2007, p. 6)

<sup>359</sup> (Weizman, 2007, p. 6)

that this leaves the spatial order of Israel-Palestine intact:

By investing so much conceptual capital in detailing its omnipotence, Weizman produces a paradigm that is hermetically sealed and has the force of nature. There seems to be no escape from it. ... It leaves unexamined its own contradictions; its misadventures; its control by politicians who have myopic ideological visions, whose thirst for land grabbing will make them choke on excessive expansion of limited economic capacities; and who seem to behave as if they are independent from the world around them.<sup>360</sup>

Building from this debate, for this part of the chapter, I will explore that which evades the grasp of sovereign power. If sovereign power seeks a certain universal mandate for itself, then this chapter is interested in how local people working largely independent of formal political organization have challenged its universality. Here I take my cue from Edward Said's reading of Gramsci's Prison Notebooks.

[A]n understanding of the historical-social world is so spatially grasped by Gramsci as to highlight the instabilities induced by constant change, movement, volatility. In the final analysis, it is this view that primarily makes it possible for emergent and subaltern classes to arise and appear, given that, according to the strictly Hegelian model, the dominant mainstream absorbs dissonance into the problem of change that consolidates the new and reaffirmed identity.<sup>361</sup>

Said challenges the notion that sovereign power has the capacity to totally absorb contestation into itself. Rather, he finds that the contingent nature of Gramsci's

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<sup>360</sup> (Tamari, 2009b)

<sup>361</sup> (E. Said, 2000)

geographical sense highlights how dominant regimes of power are shot through with tensions and fissures created and exploited by subaltern groups.<sup>362</sup> This notion of power corresponds with my wider discussion of shadow space as a shelter or as a domain of potentiality that is taken up and given form by marginalized groups. Rather than a departure from recent work of Weizman and others on the spatial order of the Israeli occupation, this chapter builds from it to fill in oversights with regard to the production of space in a colonial context, state territorialization, and the contestation that does not necessarily appeal to a state form as its goal.

About 60 percent of the West Bank land area was classified as Area C, Nature Reserve, or closed military area by the Oslo Interim agreements in 1993. According to multiple estimates, about 16 percent of the West Bank has been classified, often surreptitiously, as state land by the Israeli government, mostly during the 1980s.<sup>363</sup> When added to the amount of state land from the British and Jordanian periods in the West Bank, the total is at least 26 percent of the West Bank. Much of these areas are likely to lie “dormant,” unbeknownst to the Palestinian owners until they are enrolled in projects to develop Israeli settlements, roads, or other infrastructure at a future point. Finally, about 10 percent of the West Bank has been declared Nature Reserve since Israel issued Military Order 363 in December 1983. British Mandate Authorities set the rough boundaries of the Wad Qana reserve with the Forest Ordinance of 1926.<sup>364</sup> While many point out that the major urban concentrations of Palestinians in the West Bank are within

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<sup>362</sup> (E. Said, 2000; Wainwright, 2005)

<sup>363</sup> (Btselem, 2010, p. 24)

<sup>364</sup> This is illustrated in the El-Eini’s map of Nature Reserves in 1927 with the Wad Qana area not labeled but clearly visible (El-Eini, 2006, p. 202). The details of the ordinance are also available here, (Cohen, 1993, pp. 53–57).

Area A, or nominal Palestinian control, the vast majority of the land lies in Area B and C. Thus, as Tamari has pointed out, Area C constitutes one of the most important terrains of contestation.<sup>365</sup> These areas, especially Nature Reserves, assumed by many to be off-limits, are actually fraught with tension, fragile, and contested, especially when considered in historical perspective.

*Nature reserves as infrastructures of recalcitrance*

We have noted that the town of Wad Qana is located within an externally imposed Nature Reserve. The stated aim of nature preserves is to protect certain areas from cultivation of the land or chopping of native shrubs and trees. They were unilaterally declared on Palestinian land and have been heavily contested by local farmers who relied on many of these lands. The regulations on land use are very strict. For example, Etkes and Ofran state, “The Civil Administration runs the Nature and Parks Authority in the West Bank by authority of two military orders. The first, Order Regarding Preservation of Nature (No. 363, 1969), defines, inter alia, the concept of harming the nature reserves: ‘Harm’ – includes decimation, destruction, breakage, vandalism, picking, taking. Changing the form or natural position, or artificial disturbance of the natural developmental course. *The second order*, Order Regarding Parks (373 – 1970), defines the roles and powers of the authorities within the declared national parks in the West Bank.”<sup>366</sup> As we have seen above, the Israeli government consistently denies any Palestinian claim to these lands, using both the force of the law and the blades of bulldozers to ensure that no trees, much

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<sup>365</sup> (Tamari, 2009b)

<sup>366</sup> (Etkes & Ofran, 2007)

less any buildings, are erected within their boundaries.

It has also been pointed out that the Israeli government allows settler groups to build within the boundaries of its own declared Nature Reserves. This is treated as a contradiction to the conventional idea of Nature Reserves. A recent report estimates that thirty-one settlements consisting of 290 structures were located within the boundaries of the reserves in 2007.<sup>367</sup> However, it is overlooked that the Nature Reserves in the West Bank since their inception in early 1969 were taken up within the process of “land seizure” under the Ministerial Committee for Settlement.<sup>368</sup> This meant that they were seen as land reserves for future settlement. Moreover, the logic and declared reserve areas by Israel in 1969 are consistent with those established by the British Mandate era Forest Ordinance of 1926. A.Y. Goor, a Mandate-era forestry official, said that, in practice, villagers were allowed to graze and cut from the forest reserves but not to cultivate. This was to ensure that “no new claims to ownership based on cultivation are allowed to arise.”<sup>369</sup> We must note, as El-Eini does, that Goor was a Zionist member of the British Mandate Authorities who by 1947 had become the highest-ranking forestry official in the British Mandate government.<sup>370</sup> Despite the British officials’ claimed need of reserves to control soil erosion, stabilize sand dunes, and restore the land, it was explicitly part of a settlement project and was widely recognized by peasants and as a means to enable the

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<sup>367</sup> This report also states that 1,790 dunams (442 acres) of settlements were located within Nature Reserves. See: (Etkes & Ofran, 2007). However, this report misses the larger point that Nature Reserves create sphere or influence around themselves in which enables the effect of Israeli control through roads, recreation facilities, and settlements.

<sup>368</sup> (Benvenisti & Khayat, 1988, p. 60; Benvenisti, 1984b, p. 26)

<sup>369</sup> Quoted in (Cohen, 1993, p. 53)

<sup>370</sup> As El-Eini states, “Goor’s was a fortuitous appointment for the Jews because of his connections with the Haganah, the underground organisation for Jewish self-defence” (El-Eini, 2006, p. 210).

establishment and expansion of Zionist settlements.<sup>371</sup>

*Seeing the forest for the trees*

Seeing the effects of declared Nature Reserves as justifications for dispossession, Palestinian cultivators rejected the British notion of pristine nature, which excluded cultivation. Palestinian rejections of the Nature Reserve are based on concrete historical reasons, namely that such reserves, dating from their inception in Palestine, were used to clear land for the purposes of settlement.

However, the focus on cultivation from British authorities and later Israeli officials also provided a kind of infrastructure with which to contest dispossession. More specifically, they required the state to constantly recalibrate its definitions of cultivation. This political being, however, is best understood as a kind of embodied practice rather than a preordained logic. As such, it could be argued that the reserves have been important sites of Palestinian contestation for at least 90 years. F.J. Tear, a British Mandate forestry official, said this about the Nature Reserves they were establishing, “Moreover, their existence not only involves considerable friction with people but also creates constant embarrassment in protection of reserves from encroachment.”<sup>372</sup> In fact, annual reports from the Department of Agriculture and Forests cite numerous prosecutions of “encroachments” on Nature Reserves, along with other punishable offenses such as chopping wood or grazing sheep in reserves without permits. For example, the number of prosecuted encroachments climbed from 121 offenses in 1934-35

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<sup>371</sup> (Cohen, 1993, p. 54; El-Eini, 2006, p. 202)

<sup>372</sup> (*Annual Report of the Department of Agriculture and Forests*, 1934, p. 105)

to 306 in 1935-36. With the onset of a massive revolt in 1936, especially among peasants and rural classes, the reserves were overrun by local people both out of defiance and because the land was needed. El-Eini notes that during the uprising of peasants,

The Agricultural Department struggled against the effects of the Revolt, in which it lost several of its staff, and which made large parts of the country no-go areas. Most of the agricultural institutions, symbols of British presence in the rural districts, were razed to the ground, the animals killed and the fields burnt. Demonstration farms and plots were also relinquished. The Agriculture Department had to sustain budget cuts because of security needs, resulting in reduced demonstration and extension work.<sup>373</sup>

Furthermore, four tree nurseries were destroyed, and reserves themselves were lost entirely, such as one in the Hebron region.<sup>374</sup> El-Eini describes a chaotic situation for British officials, “With the outbreak of the Arab Revolt on 18 April 1936, soon after the founding of the Department of Forests, the latter lost access to many of its reserves which were in remote hill areas. As with the Agricultural Department, it saw the destruction of much of its work; licensing was difficult and over-cutting went uncontrolled.”<sup>375</sup>

It was not until after the end of the Arab Revolt in 1939, that the Agriculture Department of the British Mandate was able to begin recovering work in the rural areas. Even the earliest reports on the status of identifying, surveying, and declaring Nature Reserves are sprinkled with accounts of local farmers, land owners, and others defying

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<sup>373</sup> (El-Eini, 2006, p. 159)

<sup>374</sup> (El-Eini, 2006, p. 199)

<sup>375</sup> (El-Eini, 2006, p. 197)

orders to stop cultivation of lands they had historically farmed. The status of the Forestry Department itself was put into question by the revolt, though, in the words of El-Eini, it “survived” in the end. Moreover, as we saw above, Nature Reserves from the British Mandate were affirmed and then promptly expanded upon after the Israeli occupation of the West Bank in 1967. The body in charge of forest reserves in the West Bank was part of the Ministerial Committee for Settlement within the Israeli government. After the Oslo accords, Israeli officials charged that Palestinian farmers, on orders and paid by their leadership, began to “invade” areas that had been declared state land.<sup>376</sup> This set into motion a whole series of actions by the Israeli government and settler groups to counter what they considered to be an somewhat effective strategy of planting older trees to make claims that the land had been cultivated for 10 years consecutively. While the “tree war” literature has shed light on the motivations and exchange of legal maneuvers between Palestinians and Israelis over the question of state land, they overlook important questions:<sup>377</sup> What practices come to be considered cultivation, and what practices do not? What are the politics of this distinction?

As we have said above, in the void between “cultivated” and “uncultivated” lies agricultural life on the land. Places such as Wad Qana and many others around the West Bank unsettle the seemingly absolute separation between the two categories effected by Israeli law. Palestinian responses are best understood within the structure of colonial power. Cutting, planting, and grazing are responses to and through that power. Thus, the efforts to plant vast groves of olive trees and land “reclamation” projects that build and

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<sup>376</sup> (Irus Braverman, 2008, p. 463)

<sup>377</sup> (Bardenstein, 1998; I. Braverman, 2009; Cohen, 1993)



rebuild terraces are responses to colonial power and do not exhaust local conceptualizations of the land. This can be seen as early as 1925, as we saw in the previous chapter when Najib Nassar, on visiting families in the Galilee village of al-Mujaydil, said “that they should establish a (*tharwa*) treasury of 500 olive seedlings for each son of the village.”<sup>378</sup> We saw the idea again with Hassan Mustafa’s distinction between identity as image and identity as substantiated personhood. He stated, “Then establishment of identity for the villager carries the meaning of substantiation of his person, not his image, on a particular parcel of land, not on a piece of paper.”<sup>379</sup> We can see from both Nassar and Mustafa, among other Palestinian intellectuals, that clearly there was a difference between inhabited land and uninhabited land. However, the seeming *absolute* difference between cultivated and uncultivated is a product of Israel’s interpretation of the law, not practices on the ground. Crucially for this discussion, however, Mustafa argued that the peasant’s political being emerged not from external validation but from the daily life upon the land.

What, then, is distinct about the Nature Reserve? We saw above that the concept of state land in the Israeli government’s interpretation counted only stonefruit (drupe) tree cultivation as cultivation. However, in the Nature Reserve, tree cultivation is strictly prohibited. Cultivation in the Nature Reserve ruptures this dynamic because the law bans tree-based cultivation but allows other kinds (cereals, etc). This was done to prevent new claims to ownership.<sup>380</sup> In this way, the effect of declaring places such as Wad Qana as

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<sup>378</sup> (N. Nassar, n.d., p. 143)

<sup>379</sup> (Mustafa, 1945, p. 10)

<sup>380</sup> (Cohen, 1993, p. 54)

Nature Reserves provides infrastructure that Palestinian farmers can use to call into question the grounds for confiscation. Using, not ignoring, the legal category of Nature Reserve, as we will see next, they call into question the definition of cultivation and of “natural state” of the land with each new order or with each rupture of the wastewater pipe. Seen from the perspective of embodied practice on the land, the Nature Reserve appears in relation to a more complex mixture of forces, human and otherwise, and calls into question the bifurcation of cultivated and uncultivated land.

*Spring Water, Rain Water, Wastewater*

The Wad Qana valley itself mocks easy distinctions. *Wad* in Arabic can be translated as valley. But it can also be translated as a technical term: “intermittent stream” or “dry wash.” These valleys are common in Mediterranean and arid regions. In the southwestern United States, they might be called *washes*, and they are known in Latin America as *arroyos*. In Italy they are known as *torrentes*. By definition, they muddle any distinctions between river, stream, valley, and dry gully. They are defined by their unruliness. They might be dry during much of the year, they might be fed by natural springs, they might have pools of standing water for part of the year, or they might be engulfed by raging torrents during winter rains. Accordingly, cultivation corresponds to the rains and the strength of the flow from natural springs.

In Wad Qana, cultivation is an absent presence, a shelter allowing for the reimagination of the valley against and within the strictures of the spatial order of occupation in the West Bank. The presence is not always perceptible by technologies of

the state, whether in law or aerial photography. This cultivation is a human effort of tilling and planting but also of interpretation and imagination. Yet the plants and animals also have lives of their own. Wad Qana is rife with such activity. This activity inhabits the gap between that which is called “cultivated” and that which is called “uncultivated.” Sheep and goats graze across the valley; seeds lie dormant in the ground, out of satellite-sight, awaiting the rains; wind and rain erosion cover over tillage; droughts mask the plots of grain; floods damage the groves; good rains bolster the springs and make more irrigation possible; wild plants such as ‘akkūb, lūf, zātar, nānā that are important to the diet but also lucrative are collected; constant change marks the availability of wells, roads, checkpoints, and settler violence, which in good years make cultivation in some areas possible where they were not; the climate shifts; and, finally, local seeds adapted to drier conditions are sometimes more available. Certainly, other forms of contestation such as tree planting have been the subject of a great deal of research, what might be known as the tree-war debate.<sup>381</sup> The orange groves have been allowed until now by Israeli authorities. Grazing is strictly prohibited but has been a significant part of Wad Qana’s history. The collection of wild plants is also prohibited, and farmers are regularly cited and fined for collecting the “protected” plants.<sup>382</sup>

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<sup>381</sup> This is a large literature. Some salient examples include, (Bardenstein, 1998; I. Braverman, 2009; Cohen, 1993; Weizman, 2007)

<sup>382</sup> (Gurvitz, 2011)

### SECTION 3. CONCLUSION: EXPERIMENTS WITH NATURE

Farmers in Wad Qana keep planting different kinds of trees, sowing grains, gathering wild plants, building small buildings, rebuilding terraces, and spending the night in their former homes. If something is stopped or banned, new methods or other activities are tried. With each intervention from the park authorities, army, and settler groups, the state must re-establish and police its separation between cultivated and uncultivated. In this way, embodied practice and strategic thinking calls into question the distinction between cultivated and uncultivated. This inverts the notion of the West Bank as a “laboratory” for the Israeli government.<sup>383</sup> Rather than the passive objects of Israeli policy, this type of experimentation inverts the equation and shows how shadow-spaces in fact become fleeting laboratories for the question of sovereignty and territory.

Thus the vegetative and fluvial activity of the landscape and of people in Wad Qana constitutes a kind of practice that interrupts efforts to secure Nature Reserves as such. These practices make other forms of cultivation visible and expose the strictures of the legal definition of cultivation. This practice inhabits both legal and extra-legal spaces.<sup>384</sup> These practices strike at the heart of the land regime in the West Bank, deploying the categorization of Nature Reserve as a wedge to hold open a gap, a fissure, in between the cultivated and uncultivated. Thus, practice names the activation of a kind of botanical record in the landscape, only partly under human control, to carve out a new sense of self that does not correspond neatly to state-based political orders. It is constituted through concrete practice rather than abstract rights. I have attempted to show

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<sup>383</sup> (Tamari, 2009b)

<sup>384</sup> This fills in important on Weizman work on moving the wall to do the ‘least damage’ by showing the extralegal practices used by farmers to displace the question of cultivation (Weizman, 2011).

in this section how these practices have historically participated in the territorialization of Palestinian nature.

The places where cultivation is most restricted in the West Bank, such as Nature Reserves, illustrate most clearly the problems with this distinction. They are the fissures in the seemingly hermetically sealed land confiscation by “state land” process. They neatly expose the absolute separation between cultivated and uncultivated as an *effect* of colonial power rather than a constitutive element.<sup>385</sup> For the lived reality of Wad Qana, of cultivated and uncultivated, cannot be parsed by official state classifications.<sup>386</sup>

When Palestinians work the land, they are not necessarily only appealing to the legal system, but rather they realize that planting the land enables them to mount a challenge to land confiscation and that the act will have possibly unforeseen effects. Reducing their actions solely to legal advocacy misses the point. Certainly, within the colonial framework, they are attempting to secure legal claims to the land. However, they in doing so they attempt to call legal belonging to land *itself* into question. Through maintaining their citrus and olive groves, farmers in Wad Qana activate both the traces of recent habitation of Wad Qana and the Nature Reserve legal classification as a kind of material infrastructure to contest their dispossession.

The valley’s auspicious geo-morphological circumstances and its warm location at the edge of the central highlands, combined with the valley’s natural springs, allow for the cultivation of subtropical crops such as oranges. Yet these factors rarely enter into consideration of Palestinian contestation and certainly not into discussion of Israel’s

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<sup>385</sup> (Mitchell, 1988)

<sup>386</sup> (J. C. Scott, 2012; J. C. Scott, 2009)

spatial grip on the West Bank. Many farmers have come to understand the limits of costly legal suits and the impotent challenges made in official political discourse, only to cling to shreds of land for limited amounts of time.

The instances where Palestinians have most successfully challenged the process of dispossession have been when they have transformed the structure of the land contest through material practice rather than relying solely on the legal system. These instances demonstrate how they challenge dispossession of land at a more fundamental level by building more durable opposition to land confiscation.

To reproduce the spatial order in the West Bank, Israel must constantly police the boundaries, such as public/private land, state land and private land, Nature Reserve, or between that which is considered cultivated and that which is considered uncultivated. Spaces such as Wad Qana constitute fissures in the politico-ecologic landscape of Israel-Palestine, constantly posing the question of the environmental and political future of the area. It follows, then, that the rightfully well-documented technologies of government and surveillance employed by the Israeli state cannot make a full accounting of the village and valley of Wad Qana. The village reemerges constantly despite restrictions; it has flourished into the unruly space between that which is considered cultivated and that which is considered uncultivated. The irony is likely not lost on the residents of Wad Qana and its corresponding town, Dayr Istiya, that it is precisely the declaration of the Nature Reserve that has enabled farmers to unsettle the political registers of sanctioned and unsanctioned cultivation. This is accomplished by planting in restricted areas. Cultivation for the state is the vexing juncture where its driving logic to consolidate

control over land meets the daily practice of Palestinian farmers. Planting in restricted areas hits at the heart of the issue because the state requires justification based on the status of cultivation to carry out appropriation of land. The state in this case could simply drive Palestinians from Wad Qana with brute force. However, the legal framework it has built over many decades poses many complications as the state struggles to evaluate land use through its layered grid of agronomic measurement. This reliance on the adjudication of cultivation provides the infrastructure for Palestinians, often not to stop annexation of land, but to make that annexation more difficult. They have come to learn from experience that the spaces where the law is forced to most minutely monitor land use is also the place where the inadequacies of its territorial logic are most pronounced and therefore vulnerable. Rather than attempt an escape to an outside that is external to the legal system, farmers pry open the incongruities of the question of cultivation from within its fissures. In doing so, they rely precisely on the same concept of cultivation as the law because they understand that the law is also inescapably bound to the concept.

From the perspective of the map or at the level of discourse, the spatial order of control in Palestine appears chokingly effective. Yet from the vantage of places such as Wad Qana, the spatial order of the West Bank is revealed as a space shot through with fissures that haunt it with vexing historical traces and also shadows that harbor the potential for contestation if activated and given form. Difference must be constantly produced to hermetically distinguish peoples, natures, lands, and ideas. Each iteration of Wad Qana's staging as Nature Reserve presents an opportunity for farmers to reveal the inadequacies and failures of land classification of the valley. In doing so the farmers also

reaffirm their right to political community in common without need for external validation.



## **CONCLUSION / Thinking Shadow Spaces**

In the spring of 2012 seventeen acres of farmland in Wad Qana in the central highlands of the Palestinian West Bank were flooded by wastewater from Israeli settlements in the area.<sup>387</sup> The area has been classified as a nature reserve. Local reports allege that wastewater from the nearby Israeli settlement, which was established in 1991, had overflowed its pipes and flooded farm fields in Wad Qana. In the case of such occurrences, local farmers notify the office of the mayor, who in turn contacts Palestinian authorities, who in turn contact Israeli authorities to fix the problem. The farmers build their case on the fact that wastewater damages both their crops as well as the ‘natural landscape’ of the nature reserve. This reserve was imposed unilaterally by Israel in 1986 (though the reserve predates the latest codification in 1986) and is used to frustrate Palestinian cultivation in the area. The irony of Israeli wastewater damaging an area classified by Israel as a nature reserve is not lost on local people. It is precisely the interest in - and restrictions on - cultivation enacted through legislation related to the nature reserve that allow the farmers to lodge complaints on the basis of damage to their crops. They show how the water damaged their citrus trees, wheat fields, or olive trees. The complaints are handled through various legal mechanisms in Israeli courts. Thus, by requiring the state to constantly adjudicate on the status of cultivation in the valley, the farmers illustrate the duplicity in the application of law and more fundamentally, call into question the law’s attempt to govern the relationship of farmers to the land. While the

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<sup>387</sup> (Applied Research Institute-Jerusalem and Land Research Center, 2012b)

complaints lodged do not directly question the structure of restrictions on cultivation, such situations, especially when forced by unforeseen events, instigate consideration about the agricultural status of the area. I argue that such events or historical traces open cultivation as a question rather than assuming the invariability of the ‘nature reserve’ category in advance. It is precisely in this spirit of an open question that I would like to explore some of the core insights resulting from this above dissertation.

In this dissertation, I have explored the relationship between practices of cultivation and control over land in the area of Israel-Palestine. The *question of cultivation* gives expression to this relationship. Drawing from literary and historical concepts, I argue that this problematic opens a productive arena of inquiry as to how cultivation emerges simultaneously as the site of potent technologies of representation and enduring practices of persistence. I further argue that understanding these two modes of representation and persistence requires rethinking the history of cultivation not as linear development but rather through a series of contingent moments. I contend that the two central modes of cultivation operate by summoning the traces of past events and folding them into the present to address a current issue. Accordingly, drawing from the literary concept of *zill-shadow* I propose a *vernacular theory of shadow spaces* that gives expression to the double valence of the *zill-shadow* as both a trace and a shelter. It is in the shadow’s capacity to shelter alternative accounts that they haunt. In this way, the shadow space both marks a trace or ruin in a narrative or a landscape, but also shelters other forms of political and social community. More generally, such an understanding of history and geography enables me to explore both paths that were foreclosed and paths

that were taken with regard to cultivation. This conceptual insight in my dissertation illustrates that a view of Palestine from the vantage of its shadow spaces allows political form to remain an open question, that is, one that does not disavow the state form but refuses its questions it as the *telos* of politics.

### **On method**

I have shown in this dissertation that scholarly methods of analysis of the question of cultivation in Historic Palestine have not been adequate. A chronological account would not have allowed me to adequately consider the question of cultivation because it produces a narrative of linear development of methods, practices, and events. In contrast, I propose that the question of cultivation is better considered through a series of contingent moments in which the past is constantly brought forth and put to work in a present situation. Rather than assuming that a particular cause has a particular effect, this dissertation has attempted to show how a given effect calls its cause into being by summoning it from the past. This approach emerged directly from the material because I found that the traces of the past were constantly invoked to render the present available in particular ways. For example, to return to Wad Qana, this understanding of method means that the wastewater spewing from leaking pipes allowed farmers to invoke bodies of juridical categories, historical traces in the landscape, and embodied practice of cultivating the area to build a kind of infrastructure of recalcitrance in the present. The recalcitrant qualities of those practices allowed the farmers to hold ask the land question

inherent to settler-colonialism. In this way, the question of cultivation gives expression to both technologies of representation and practices of persistence.

What emerges from this methodological approach? In the shift from history as linear development to a genealogical approach, the stability of categories like ‘Fellah’s Farm’ or ‘nature reserve’ is called into question. In other words, by focusing attention on the historical traces that stitch together the present, I am better able to explore the moments when alternative trajectories and narratives were foreclosed. Moreover, however, as the double valence of the *zill-shadow* illustrates, I am better able to recognize that the landscape shelters a variety of different possibilities of political form. This methodological approach leaves the question of political form as an open question in the way that cultivation practices described above keep the land question of settler-colonialism open. By too quickly overlooking possible scenarios that were foreclosed at a given conjuncture, then, as scholars we lose space for a more imaginative thinking of political community.

What does this more open understanding of history and geography mean for thinking post-colonialism in the Palestinian context? We may say crudely that the intent of post-colonial theory is to account for the lasting effects of colonial logics on colonized peoples. This aims to escape a simple inversion after the end of formal colonial rule. However, this attempted *displacement* often falls short because the critique reverts to standard theoretical approaches that merely invert modes of analysis inherited from colonial rule. This is evidenced in the way that nationalist projects have a European liberal state as their end goal. Such a state necessarily produces a series of exclusions and

its own forms of coloniality in the process. The danger of an anti-colonialism that seeks to ‘invert’ power relations is that it remains trapped within the very colonial categories that it resists.

I have argued that within the Palestinian context a methodological stance that better apprehends the situation must begin from the contingencies, fissures, and conjunctures that compose the present. More importantly, a focus on the shadow spaces offers more space for other forms of political community because it explores the overlooked or effaced traces that find shelter in the ruins of the established history.

What are some of the contributions of a vernacular theory of shadow spaces? In Part 1 of the dissertation, I attempt to show how traveling discourses of science and law mediate the 'land question' in settler colonial contexts, revealing their structural connections. I also use the *zill*-shadow to extend the insights of post-colonial theory and subaltern studies in settler colonial contexts. I attempt this move by showing how attention to the *politics of representation* around cultivation illustrates its production as an abstract concept and alternative accounts left in its wake.

In Part 2, my primary interventions are to offer a novel political ontology of Palestinian persistence by bringing together the vernacular concepts of *zill*-shadow and steadfastness. This vernacular theory, in its attention to the contingent set of relations between historical traces, shows how political being cannot be understood as preordained. Rather, the *politics of persistence*, as explored through concrete practices of cultivation, helps to rethink the political status of embodied practice within a settler-colonial context where the ‘land question’ lies at its heart.

My overall contribution is to offer a vernacular theory of shadow spaces as a framework to, first, rethink the formation of settler colonialism in Israel-Palestine and, second, to rethink the "grounds" (ontology) of political contestation. I do this by combining the double-valence of zill-shadow (trace and shelter) with two aspects of 'cultivation', first, abstract object fabricated as neutral counter by science and law; second, political practice that produces labored landscapes and a politics of persistence.

### *Postscript*

I hope to explore the question of cultivation further by conducting life histories with Palestinian farmers to formulate a more specific understanding of how they understand their own political being in relation to their practices of cultivation and other activities. Another way I intend to explore this topic in a more historical register is through the archives of early Arabic newspapers like *al-Karmil* in order to give more breadth to my discussion of rainfed farming and cultivation practices of persistence. Moreover, I plan to explore court testimony of cultivators in British courts during the Mandate period to understand the interaction between state-based attempts to adjudicate cultivation practices and cultivators. This extended fieldwork and archival research will bolster my existing study.

The themes explored above raise an issue that requires more elaboration as this project develops beyond the dissertation. Namely, the position found above on the political ontology of being can be misread as one that flattens the power dynamic

between the occupied and the occupier. However, the use of a settler-colonial framework illustrates that the ontological status of the local cultivator whose land is threatened is more open to the matters of land rights and sovereignty than in other colonial situations. Mahmud Darwish, Edward Said, and other prominent intellectuals drew on this theme in the wake of the foiled efforts of the Oslo-era framework of limited Palestinian autonomy. Darwish expressed this sentiment beautifully when he wrote, “I belong to the question of the victim.”<sup>388</sup> That is, Darwish does not believe his national identity as a Palestinian exhausts his political being. I believe this powerfully orients scholarly and ethical concerns toward the question of justice rather than essentialized national belonging.

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<sup>388</sup> (Darwish, 2008)

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