

Swords and Plowshares  
Jewish non-Weberian Governance in British Palestine  
by  
David Muchlinski

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Graduate Supervisory Committee:

Carolyn Warner, Chair  
David Siroky  
Michael Hechter

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## ABSTRACT

What does it mean to speak of governance in the absence of states? This dissertation seeks to answer this question through an empirical examination of the founding of two unique agricultural settlements constructed by the Jewish community of Palestine, also known as the *Yishuv*: the kibbutz and the moshav. Commonly, in order to be considered effective, states must, at minimum, provide their population with two critical public goods: the satisfaction of their material needs and their physical protection through a military or police force. Dominant assumptions across multiple subfields of both Comparative Politics and International Relations content that because weak and failed states cannot provide their civilian populations with these critical public goods, that governance in the absence of effective, sovereign, and territorial states is a myth. It is often argued that violence, anarchy, and human suffering inevitably follow in the wake of state collapse and that in order to alleviate these problems, state building practices must focus on creating a fully sovereign state that has a monopoly on the legitimate use of violence within its borders. This dissertation questions these assumptions. Through quantitative analysis of an original dataset constructed from Israeli archival sources as well as a qualitative historical examination of declassified Israeli archival material from 1920-1948, this dissertation demonstrates that it is possible for non-state actors to construct institutions of governance within the context of a weak or failing state. The Jewish community, through its organs of governance, utilized the kibbutzim and the moshavim to provide the all important public goods of military defense and economic growth respectively. It is shown in this dissertation how political institutions can be crafted endogenously within weak and failing states and how these institutions may actually serve to increase political stability, staving off anarchy and violence.

## DEDICATION

To John Thomas Carrol:

The candle the burns twice as bright burns half as long. And you burned so very very brightly.

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## Chapter 1

### INTRODUCTION

In 1948 the Jewish community of Palestine, known in Hebrew as the *Yishuv*, braced for an all out war. Only a decade earlier, the Jews of Palestine watched in horror as Nazi Germany dragged their European kinfolk out of the ghettos and to the gas chambers. Now, it appeared, the Jews of Palestine would again have to fight against another enemy dedicated to the destruction of the Jewish people. The withdrawal of the British Mandatory government left a power vacuum in Palestine - one that both the Palestinian Arabs - and other Arab peoples - and the Jews sought to capture. The Jews, though outnumbered by a considerable amount, were better trained and a more cohesive fighting force, having been trained by the British during World War II in preparation for a German invasion of the Middle East from North Africa. The military divisions of the Jewish community - the *Haganah*, Hebrew for “defense”, and the *Palmach*, the elite troops of the Haganah - were dug in at critical locations in preparation for the inevitable Arab invasion. And the Arabs did invade. From Egypt, Iraq, Jordan, Syria, and from within Palestine itself, Arab armies invaded Palestine with the goal of pushing the Jewish community into the Mediterranean Sea. Yet the Yishuv prevailed in 1948, taking control of Palestine and founding the state of Israel.

Critical to the Jewish victory in 1948 were two unlikely heroes - both agricultural settlements. The first, called the *kibbutz*, was a communal agricultural settlement where private property and wage labor were done away with. The second, known as the *moshav* was similar to the kibbutz, but in the moshav communal life was much less intense, and the individual nuclear family was considered the most important social unit and private property rights were upheld. Fierce battles at

many *kibbutzim* (plural of kibbutz) turned the tide of the 1948 campaign for the Jewish community. Jewish pioneers, despite being constantly outnumbered, managed to repel, halt, or slow invading Arab forces at kibbutzim such as Dafna, Dan, Degania, Yad Mordechai, Mishmar HaEmek, Kfar Darom, Negba, Gesher, Ramat Rachel, Ein Gev, and Gal-On, among others. During the battle of Yad Mordechai, for instance, one hundred and ten kibbutz members, reinforced by twenty Palmach soldiers, repelled two Egyptian infantry battalions, one armored battalion, and one light artillery battalion for four days - giving the Haganah ample time to regroup and crush the Egyptian forces decisively a few days later.

The moshavim played an equally important, if less glamorous role, in paving the way for Jewish success in 1948. While the moshavim were not at the front lines of combat, they played an important role behind the scenes, growing and developing a robust economy that provided the Jewish community with a way to efficiently allocate resources and construct the foundations of a strong community. By building up a light industrial capacity as well as a robust agricultural sector, the moshavim supplied the Jewish community with many of its needed material goods.

The settlement pattern of kibbutzim and moshavim in Palestine from 1920-1948 reveals an interesting empirical pattern. When relations between Jews and Arabs were peaceful, as they were generally from 1920-1936, 52% of moshavim were constructed as opposed to only 23% of kibbutzim. When relations between the two groups turned violent however, as they generally were from 1936-1948, 77% of kibbutzim were constructed as opposed to only 48% of moshavim. In order to explain the development of governance in stateless societies, like the Jewish community during this period, this dissertation examines the reasons why so many more kibbutzim were constructed as ethnic relations turned violent and why more

moshavim were constructed during years of peace. To do so, I examine the abilities of these settlements to contribute to the military security and economic prosperity of the Jewish community by investigating micro-level patterns of behavior within these institutions through both quantitative and qualitative methods.

What factors contributed to the kibbutzim being able to be effective military outposts while the moshavim were able to contribute to the growth and development of the Jewish economy? How do different institutions, like the kibbutz and the moshav, come to be endowed with particular comparative institutional advantages (Hall and Soskice 2001) and the abilities to contribute to different aspects of governance? Finally, how do systems of governance emerge in places like Palestine in 1948, where central state authority has collapsed or does not exist? In this dissertation, I seek to explain how systems of governance emerge in stateless societies. I contend that the development of non-Weberian political order - that is, political, economic, and social order that does not emanate from a sovereign and territorial state - and hence non-Weberian political institutions, is best explained by a process of social evolution whereby various selective pressures determine specific patterns of social behavior that endow political, economic, and social institutions with various comparative advantages in the performance of certain functions of governance. Governance can be characterized as “decisions issued by one actor that a second is expected to obey,” and refers to the control of social interactions by non-state actors (Kahler and Lake 2004; 409). Governance in stateless societies thus entails an assessment of a non-Weberian authority to regulate life within its territory and to provide certain public goods to the population under its control through the establishment of ruling institutions (Mampilly 2011).

This dissertation seeks to understand how various selective forces operating within various institutions systematically mold and condition various norms and patterns of social behavior which in turn explain the ability of institutions to provide various public goods.

To determine how institutions come to develop in stateless societies, I utilize an evolutionary model that examines the effect a single causal factor has on the social behavior of various populations of individuals acting within a given institution. I argue that an institution's relationship to capitalist markets determines whether individual behavior inside of that institutions will evolve over time to become self-regarding, that is self-interested and egoistic, or pro-social and altruistic. Whether an institution is integrated or not integrated with economic markets determines whether or not the social behavior of individuals acting inside that institution will be self-regarding or pro-social respectively. The pattern of social behavior that exists within an institution determines what kind of public good that institution can produce. Institutions where self-regarding behavior is prominent will produce public goods through a decentralized process that ensures maximum efficiency and Pareto optimality (Kreps 1990), while institutions where pro-social altruistic behavior is common will produce public goods marked by jointness of production (Hechter 1988).

This dissertation tests these propositions with both a quantitative examination of an original statistical dataset compiled from original Israeli archival source material and a quantitative historical examination of both archival documents and secondary historical sources. The statistical data cover 270 unique moshavim and kibbutzim and records extensive information about each settlement's integration with capitalist markets.

The qualitative analysis examines how various levels of market integration among kibbutzim and moshavim led, over time, to the institutionalization of pro-social and self-regarding behavior respectively.

Though the question of governance is of perennial interest to political scientists, the development of non-Weberian political order has received scant attention either theoretically or empirically. Recently, some researchers (Weintein 2007; Mampilly 2011; Keister 2011) have begun to examine the way in which rebel and insurgent organizations develop systems of control among their members and among the broader civilian populations under their control. Further, research in disciplines other than political science, including archaeology, cultural anthropology, sociology, and economics have long contributed theories about the evolution of human society from tribal hunter-gatherer groups to complex state-led societies. These literatures are rich soil for possible interdisciplinary fertilization when discussing the evolution of political order in stateless societies. Yet, this promising line of research is in its infancy in Political Science and the dominant narrative regarding non-Weberian order among political scientists regards these areas solely as threats to domestic and international security (Krasner and Pascual 2005; Stanislawski 2008; Capersen and Stansfield 2011). This dissertation seeks to challenge this narrative both theoretically and empirically. To do so, I traveled to Israel from December 2011 to January 2012 and conducted archival research at the Central Zionist Archives in Jerusalem and the Yad Tabenkin Archives in Ramat Eff'al. Combining the fruits of my research there with other historical accounts of Zionist settlement in Palestine from 1920-1948, this dissertation seeks to explain the underlying causal factors that shaped the provision of two different public goods by the moshavim and kibbutzim: economic growth and military security.

While those who live in failed and failing states understand that political, economic, and social order often emanate from various non-Weberian sources, there are few empirical studies that have examined how non-state actors have constructed systems of governance to provide needed public goods when state authority has collapsed (Mampilly 2011, Keister 2011). Because an increasing number of people are now living in areas where state authority is absent, there is a need to understand the institutions that develop in these societies to control the daily lives of the populations that interact with a myriad of sources of political and economic authority. And because levels of violence vary among and between so-called failed states there is an urgent need to understand the reasons why some of these societies are relatively peaceful while others have degenerated in violence. The better we grasp the relationship between non-state actors and the construction and evolution of non-Weberian governance, the more we know about a society's potential to explode into open conflict and civil war. And also, the more we understand the construction of non-Weberian order, the more we can understand and improve upon our current state building policies in militarily hostile areas like Iraq and Afghanistan.

### Context of the Study

While scholars have gone to great lengths to document the nature of the state in the developing world, and have correctly argued that the inability of a state to achieve a monopoly on the legitimate use of violence within its borders has serious implications for ideas about state sovereignty and can lead non-state actors to challenge that sovereignty, they have failed to adequately account for systems of governance in such societies, instead viewing areas where state authority has receded as anarchic wastelands (Mampilly 2011). This state-centric tendency in



political science is understandable, for political science is nothing is not the study of states and their politics. But this state-centric focus is also deeply problematic for it implies a basic Hobbesian conjecture - namely that if the state cannot provide order, no order will be provided. This assumption - that the absence of a strong state implies a return to Hobbes' state of nature and all out conflict - has limited our understanding of how systems of governance which are not state-centric develop in conflict zones, failed states, stateless societies, and other non-Weberian orders. While much research has focused on conflict in weak and failed states (Hegre et al. 2001; Fearon and Laitin 2003; Collier and Hoeffler 2004; Hegre and Sambanis 2006), few studies have focused on how non-states actors in such societies construct institutions to mitigate violence and govern civilian populations (Mampilly 2011; Keister 2011). Current theories of state building contend that greater state penetration into civil society will replace parochial loyalties to kin, religious, or ethnic networks and straighten state sovereignty (Fukuyama 2004; Rotberg 2004; Krasner and Pascual 2005; Caspersen and Stansfield 2011). Little is known, however, about developing state institutions from endogenous social institutions - much of the focus is on the importation of Western OECD institutions - not all of which may be well suited to the context in question (Boege et al. 2008).

Whether labeled as quasi, separatist, unrecognized, failed, collapsed or de facto states (Jackson 1990; Lynch 2004; Caspersen and Stansfield 2001; Zartman 1995; Pegg 1998), both institutions of political order and outbreaks of violent conflict vary across such non-Weberian political orders. Whether it is through kin or ethnic groups, religious groups and religious courts, armed militias and rebels, or simply through tribal elders and local bosses, systems of order have developed in failed states to preserve order as social groups recognized that continued violence is

often detrimental to all parties involved. The question is, how do these institutions of governance emerge, and what do they look like? In short, what this dissertation is concerned with is the development of endogenous political, economic, and social institutions within stateless societies. Put differently, non-state actors must develop institutions of governance that, at minim, provide two all important public goods. They must provide for the military security of their populations and satisfy their material and economic needs (Tilly 1975).

A rich interdisciplinary literature has examined patterns of large and small scale collective action among social groups (Olson 1965; Hechter 1987; Ostrom 1990, 2010; Lichbach 1998; Henrich et al. 2005). Recently, this literature has begun to examine the evolution of collective action and cooperation within and among various groups. One critical insight which has emerged from this literature is that the institutional context an individual finds herself in affects her propensity to engage in collective action. Specifically, recent research has shown that when individuals are acting within an institution which is market-orientated, those individuals come to behave in ways consistent with rational egoism and short-term utility maximization (Blowles 1998, 2004; Henrich et al. 2005; Gintis et al. 2005; Carpenter 2007). This type of behavior is problematic for groups trying to engage in collective action for the rational strategy for any self-regarding individual to follow in collective action situations is to free ride off the contributions of other individuals (Olson 1965). Hence, when individuals are incentivized by market forces it may be difficult for cooperation to evolve among that population of individuals (Axelrod 1984). A population of self-regarding agents, however, may still be able to supply public goods if those goods can be produced in a decentralized manner (Bergstrom, Blume, and Varian 1986). One such public good is economic growth. The Fundamental

Welfare Theorems of economics demonstrate two results: first, that a population comprised only of only self-regarding agents can create a situation where the quantity demanded of a particular good is equal to the quantity supplied and two, that such a situation is Pareto efficient - increasing the social welfare of every actor involved. Another way for public goods to be produced is through collective action within social groups. Public goods in such settings are often defined by jointness in production, meaning no single individual can fully supply the public good in question. When public goods are defined by jointness in production, cooperation among social groups must be realized if these goods are to be supplied (Hechter 1987). When individuals organize within institutions that limit the penetration of market forces, cooperation among individuals in those populations is more likely to evolve (Bowles 1998; Henrich et al. 2005; Carpenter 2007). Hence, the construction of non-Weberian political order requires a careful balancing act between two opposing institutional forms - one self-regarding and the other pro-social. As non-Weberian orders must provide both military security, a joint public good, and the satisfaction of material needs, a privately produced public good, they must supply both institutional forms. This dissertation investigates a case where a stateless society was successful at achieving this balance, but by no means does the success of the *Yishuv* guarantee success for all stateless societies in this regard.

So far scholars of Comparative Politics and International Relations have failed to take seriously the notion that non-state actors can engage in processes of governance. Much ink has been spilled discussing the causes of war in weak and failed states (Fearon and Laitin 2003; Collier and Hoeffler 2004; Hegre and Sambanis 2006) and the reasons why armed non-state actors act violently towards civilians (Wood 2003; Kalyvas 2006; Weinstein 2007). The development of

non-Weberian order, however, forces scholars to seriously consider alternative forms of political order that are not based on any sovereign territorial state. It is time for political scientists to understand what anthropologists, sociologists, and others have long understood - political power often emanates from multiple sources, and the sovereign state is only one of many possibilities. Analyzing the evolution of non-Weberian order among the Jewish community of Palestine is thus a fruitful enterprise, as it will assist scholars in understanding the factors that lead to the successful or unsuccessful institutional provision of public goods, and how the provision of public goods impacts governance in weak and failed states.

#### Data and Methods

To argue that market integration effects the way institutions provide public goods, and what kind of public goods they provide, I conducted a quantitative statistical analysis as well as a qualitative historical analysis utilizing the kibbutzim and moshavim of Palestine from 1920-1948 as my units of analysis. The statistical analysis was conducted to establish general relationships regarding market integration and public goods provision among the kibbutzim and moshavim while qualitative methods were necessary to examine the behavior of these institutions over time as well as to establish a causal chain running from market integration to the provision of military security and economic growth to the Jewish community. The empirical analyses support hypotheses derived from an evolutionary game theoretic model developed in the early part of this dissertation. The evolutionary model allows me to link micro-level mechanisms occurring at the level of the population to broader institutional outcomes at the level of the individual kibbutz or moshav.

These methods and levels of analysis were necessary to link the mediating effects of market integration on social behavior in two different institutions. In doing so, they provide a critical first look at the evolution of political institutions in stateless societies.

For my statistical analysis I utilize two different maximum likelihood statistical regressions - the first utilizing the beta distribution and the second being a probit regression. The statistical regressions are designed to examine correlations between various measures of market integration and the production of either economic growth or military security by individual settlements. Multiple regression analysis is very useful for establishing general associative relationships, and utilizing other statistical techniques including graphical analysis, analysis of variance, and even simply looking at averages, provides enough to begin to address issues of causation by ruling out alternative explanations. Of course correlation is not causation, and regressions alone cannot determine issues of causality, but they provide a strong foundation upon which can be constructed a convincing narrative through the utilization of qualitative analyses.

The qualitative analysis examines the history of Zionist settlement in Palestine, especially as it concerns the establishment of the first kibbutz, Degania, and the first moshav, Nahalal. The early history of these two settlements are compared to determine how variation in levels of market integration among these first settlements effected their ability to provide different public goods. Additionally, declassified archival documents were examined to determine what, exactly, the strategy of the *Yishuv* was when its political wings the Jewish National Fund and Jewish Agency decided to construct kibbutzim and moshavim throughout Palestine. The qualitative analysis builds on the foundation constructed by the correlations

found in the statistical analysis and extrapolates based upon the words of the Jewish leaders themselves, the causal mechanisms at work driving the provision of military security by the kibbutzim and economic growth and development among the moshavim.

### Outline of the Dissertation

In this chapter I have introduced the concept of non-Weberian governance and explained its significance for Political Science. Chapter 2 provides a more in depth overview of the concepts of non-Weberian governance, its problematic state-centric assumptions, and introduces the concept of social evolution in political science with a specific focus on the development and evolution of institutions in stateless societies. Chapter 2 further sets forth a rationale for adopting an evolutionary framework when studying the development and change of institutions in Political Science.

Chapter 3 puts forward a formal evolutionary model based on evolutionary game theory. Two specific equilibria are developed and shown to be Nash equilibria, or in the parlance of evolutionary game theory, evolutionarily stable strategies (ESSs). The equilibria developed from the evolutionary model serve as hypotheses that are then examined in Chapters 4 and 5. Specifically, Chapter 3 argues that institutions integrated with capitalist markets conditions social behavior to be self-regarding, while institutions isolated from those market forces condition social behavior to be more pro-social and altruistic. Chapter 3 further argues that the production of public goods produced through decentralized mechanisms, like economic growth, increases with market integration, but the production of jointly produced public goods, like military security, decreases with market integration.

Chapter 4 provides a quantitative examination of the hypotheses developed in Chapter 3. It tests the effects of market integration on the production of various public goods by settlements with two different regression analyses including a beta regression model and a probit model. In this chapter I develop several measures of market integration from original Israeli archival source material, and create an original statistical dataset for 270 kibbutzim and moshavim across Palestine. The conclusions of this chapter establish a solid foundation for the explication of causal mechanisms in the following chapter by providing robust correlations between market integration and public goods provision among kibbutzim and moshavim.

Chapter 5 is the final empirical chapter. In this chapter, I examine exactly how market integration effected the production of different public goods by examining secondary historical accounts of the kibbutzim and moshavim as well as declassified archival documents which detail the strategic settlement plans of the Jewish National Fund and Jewish Agency - the two political bodies responsible for constructing kibbutzim and moshavim throughout Palestine. Through a case study of the first kibbutz and first moshav, this chapter links market forces to the evolution of self-regarding behavior in the moshavim and the absence of market forces to the evolution of pro-social behavior in the kibbutzim. The analysis of archival documents allows for a detailed analysis of the reasons why so many more kibbutzim were constructed when ethnic relations between the Jews and Arabs of Palestine deteriorated.

Finally, the concluding chapter, Chapter 6, summarizes the main arguments of the dissertation, but also examines what happened to the kibbutzim and moshavim post 1948 after the state of Israel was established and David Ben-Gurion's government had a chance to consolidate power, transforming Palestine

from a stateless society to a fully consolidated, territorial, sovereign, and Weberian state. The conclusion offers insights into how endogenous state building might successfully proceed in other stateless societies.



## Chapter 2

### THE DEVELOPMENT OF NON-WEBERIAN GOVERNANCE: CONCEPTS, PROBLEMS, AND THEORY BUILDING

From that time on, however, only half my able men took a hand in the work, while the other half, armed with spears, bucklers, bows, and breastplates, stood guard behind the whole house of Judah as they rebuilt the wall. The load carriers, too, were armed; each did his work with one hand and held a weapon with the other. - Nehemiah 4: 10-11

“Whatsoever therefore is consequent to a time of Warre, where every man is Enemy to every man; the same is consequent to the time, wherein men live without other security, than what their own strength, and their own invention shall furnish them withall. In such condition, there is no place for Industry; because the fruit thereof is uncertain; and consequently no Culture of the Earth; ... and which is worst of all, continuall feare, and danger of violent death; And the life of man, solitary, poore, nasty, brutish, and short.” - Thomas Hobbes - Leviathan

This chapter explores the problematic nature of examining the development and evolution of non-Weberian political order in stateless societies. Non-Weberian order is defined as political order which emanates from non-state sources. Non-Weberian order is a diverse concept which can encompass multiple sources of political order from traditional clan structures, religious networks, as well as ethnic and other kin groups. Common to all these different possible sources of order is that such groups are all non-state actors, and hence, the political order that such groups might provide does not emanate from the state, but from a non-state actor. Non-Weberian governance is a problematic concept to political science, for our discipline often takes the state as the central unit of analysis, and hence, implicitly

understands political power as coming only from fully sovereign consolidated states. This chapter will lay out some common assumptions regarding the state in political science, explain why these assumptions and theories break down in stateless societies, and provide the necessary concepts which are needed to begin thinking about the development and evolution of political order in the absence of states.

### States, Anarchy, and Political Science

Political science is nothing if not the study of the state. Political scientists regularly take the state, or its many ancillary organizations, like political parties, interest groups, and militaries, as the central unit or units of analysis and investigate its machinations and behavior as constituting the central questions in political science. In this sense, the study of political science requires a well functioning state - for only states are capable of providing consistent patterns of behavior that are required in order for researchers to develop empirically sound theories about the behavior of nation-states and the organizations which spring from them. Political science research, both quantitative and qualitative, requires the gathering of large amounts of data from reliable sources. Well established methods constructed to analyze that data demand that we know something about the process by which that data was generated. Researchers must constantly test the validity of their initial data against new data sources, and only when their initial hypotheses are confirmed by multiple sources can it be claimed that their results are generalizable - the gold standard of scientific research.

As a result of the disciplinary demands of this kind of research, political science has tended to focus its explanatory power on cases where the probability of observing regular patterns of behavior over long periods of time is quite high. Regular patterns of political behavior among citizens and other political actors

imply the existence of a well functioning sovereign territorial state, for only states are known to have the ability to instill whether as a matter of coercion, cultural transmission, the creation of a “social contract”, or numerous other means, within political actors the ability to continue regular patterns of political behavior one long periods of time.

This common assumption of political science, that the development of political order is possible only within the presence of a fully sovereign, territorial and Weberian state which has a monopoly over the use of force within its borders, has blinded researchers to areas of the world where states do not conform to our ideal standards. For instance, analyzing politics among and within African nations within the framework of the Western sovereign and Weberian state, is for the most part useless. Few African nations conform to the ideal notion of a fully territorial and sovereign state. Further, what of other stateless territories like Somaliland, Nagorno-Karabakh, Chechnya, South Ossetia, and Abkhazia that claim sovereign statehood, but so far have not been granted it by the international community? How do political orders develop inside political entities that act and behave as if they are states, but lack *de jure* sovereignty?

The notion that political order flows only from fully sovereign and territorial states is a fiction - misleading at best and dangerously myopic at worst. This fiction draws its strength from the intellectual history of political science, which began in earnest when Thomas Hobbes postulated that the construction of the Leviathan was the only means of escaping the dangerous state of nature that makes life, “solitary, poor, nasty, brutish, and short”. From that moment on, political scientists turned to the state as the savior from anarchy and the negative externalities that flow from it.

As a consequence, geopolitical areas defined by the absence of a sovereign Leviathan were ignored by political scientists - assumed to be only anarchic environments marked by violence and a lack of political order.

We know that the state of nature is a myth. The emergence of the Weberian nation-state was neither inevitable nor natural as nescient nation-states struggled initially to compete with multiple forms of political order including city-states, and religious orders (Spruyt1994; Greif 2006). The Westphalian notion of sovereignty is often nothing more than a fiction covering over the more ambiguous, fragile, and inconsistent reality of empirical political authority (Debrix1999), and hardly exists in empirical reality beyond the OECD countries (Boege et al. 2008). Attempting to pigeon-hole the complexity of political authority in stateless societies into a familiar rubric, such as the European nation-state, creates an imprecise distinction between successful and failed states and provides few opportunities for analyzing successful instances of local governance that provide civilians with some standard of material well being (Scott 2009). For instance, despite not having a functioning central government for over a decade, Somalia boasts higher scores on social welfare indicators now than under the previous government, and local communities have provided important state-like functions including the provision of public goods like security and education (Leeson 2007; Menkhaus 1998; Menkhaus 2007; Abdinoor 2008).

Other disciplines have long studied the evolution of human societies - implying, of course, a long history of studying the construction of political authority and governance in societies not ruled by sovereign states. Cultural anthropologists (Flannery and Marcus 2012; Earle, 1997; Johnson and Earle 2000; Henrich et al. 2005; Gintis et al. 2005) have studied the evolution of human societies across many

thousands of years. They have shown how human society has evolved from small groups of hunter gathers to large complex societies through the process of cultural evolution. Human society has evolved along a fairly linear path from simple hunter gather groups to more complex societies marked by hierarchies of power and marked by rule by a stratified selection of elites and increasing economic inequality (Flannery and Marcus 2012). This evolution has been guided by processes endogenous to these small-scale societies (Henrich et al. 2005) themselves rather than having been dictated by outside forces - like elite authority - or by exogenous forces or shocks.

Economics is another discipline which as concerned itself with the organization of human society, especially as regards its more material aspects. Ellinor Ostrom (1990, 2010) was especially concerned with how groups came to develop the capacity for self governance and how they choose to organize themselves. Her research into common pool resources (CPRs) sparked a major revolution in the study of economic organization, group-based patterns of collective action, and governance. Ostrom's work highlights the ability of small groups to organize sophisticated organizational structures to solve complex collective action problems, especially as regards the use of common pool resources. Ostrom's work has demonstrated the critical role trust among individuals within institutions plays in motivating cooperation to provide public goods. In stateless societies, where the coercive power of the state cannot induce individuals to comply with laws, regulations, or other directives, maintaining levels of cooperative behavior among social groups is of paramount importance. In order to avoid outbreaks of violence, for example, maintaining networks of trust among multiple social groups may help reduce the possibility of future incidences of violence and other social ills.

While important strides have been made by cultural anthropologists, archaeologists, sociologists, and economists, Political Science largely remains deaf to these important theoretical and empirical developments from other disciplines. While it has been demonstrated that governance is indeed possible in the absence of the coercive power of the state, theory building in Comparative Politics and International Relations remains mired in the fever swamp of Thomas Hobbes' state of nature. It is simply assumed - rather than investigated empirically - that anarchy and violence inevitably follows in the wake of state failure. According to the dominant rhetoric in the aftermath of the Cold War, unrecognized states have provided nearly every threat to international security from criminalization, ethnic conflict, mass migration, to drug smuggling, and terrorism (Caspersen and Stansfield 2011; Hagmann and Hoehne 2009). While it is true that stateless societies have experienced difficulties in providing public services, upholding law and order, and representing publics through effective institutions of government, the description of these societies in such pathological terms does not provide the appropriate analytical tools for a better understanding of the governance processes of such entities (Hagmann and Hoehne 2009; von Trotha 2009). Rather than viewing stateless societies as "a thorn in the side of the state system" (Graham and Horne 2012), it is more appropriate to open our eyes to empirical reality and see that state building in the modern state system takes on a plurality of forms (von Trotha 2009; Boege et al. 2008). If political scientists and policy makers wish to achieve the dual goals of conflict prevention and economic development in these geographic areas, then we must take seriously the empirical reality of most contemporary political orders (Woodward 2009).

In contrast to top-down state-building approaches, greater attention should be paid to the stabilizing consequences of hybrid political orders in unrecognized states for these political orders may be far more stable, effective, and legitimate than the efforts to “do state building better” (Fukuyama 2004) from above, which generate political instability and economic crises across fragile and unrecognized states (Woodward 2009).

The fundamental problem for stateless societies, and the reason they generate so much conflict and discord, say scholars, is because they lack well functioning political, social, and economic institutions which can generate stability and provide crucial public goods (Krasner and Pascual 2005). Across many parts of the world, states do not conform to the OECD model of consolidated, liberal democracies. Many states are fragile regimes, marked by weak or collapsed institutions which are seen to be incapable of performing core state functions including providing physical security to civilian populations, effective political representation to the public, and even basic standards of living (Boege et al. 2008). Several literatures in comparative politics and international relations posit strong assumptions regarding these political entities. They are often viewed solely as threats to international and domestic security. Stateless societies are seen as one of the most important foreign policy challenges of the modern era - threats only consolidated Western democracies have the ability to confront (Krasner and Pascual 2005). Stateless societies are thought to contribute to nearly every security threat from ethnic separatism (Caspersen and Stansfield 2011), to drug smuggling (Stanislawski 2008) and terrorism (Kolsto and Blakkisrud 2011). Accordingly it is assumed that current state building measures must be improved upon to create more robust and effective political, economic, and social institutions within weak and failing states (Fukuyama 2004).

Current knowledge contends that the importation of Western style political institutions creates stability by strengthening state institutions in addition to enhancing the capacities of state actors to control, regulate, and implement the core functions of states, especially as regards the provision of basic public goods including security, basic public services, effective representation, and establishing legitimacy (Boege et al. 2008).

Current state building efforts, however, have ignored the deleterious effects the wholesale importation of these institutions can have in the context of these societies. In many countries the importation of Western OECD institutions has not evolved as predicted, and what state institutions have developed are largely incapable of meeting the specific political, social, and economic needs of civilians. Meanwhile, customary and traditional forms of political order have been undermined by the incorporation of ill fitting institutions and have often been usurped by various actors for specific partisan interests rather than for the common good of the nation, village, or community (Clements et al. 2007). This specific state building strategy is often so removed from empirical conditions on the ground that it is often more a part of the problem than a part of the solution (Debiel and Lambach 2009). Modern strategies of state building are seen to provide benefits for stateless societies by reducing incidences of crime, terrorism, ethnic and civil conflict, and corruption, while minimizing social and political costs. It is worth reminding ourselves, however, that current state building practices have not been accompanied by the development of the economic, social, or cultural structures that could form an efficiently functioning political order in stateless societies. Because of this, current state building strategies have largely failed (Boas and Jennings 2005; Boege et al. 2008; Mac Ginty 2010).



Instead of following the discourse of the current state building literature, I propose that it is more appropriate to speak of the stability of non-Weberian governance. As a first step, it must be acknowledged that there exist other social and political actors besides the state within stateless societies. The state has only managed to penetrate a limited segment of society, and much of society therefore remains stateless (Boege et al. 2008; Hagmann and Hoehne 2009). Statelessness, however, does not automatically imply Hobbesian anarchy, nor does it mean the absence of institutions (Boege et al. 2008). Informal institutions structure many political, economic, and social interactions on a day to day basis in these societies. Customary law, traditional social structures, such as kin-based networks, tribes, ethnic communities, and religious orders, as well as traditional authorities such as elders, clan or tribal leaders, and religious authorities guide everyday social interaction among large segments of civilian populations across the world (Boege et al. 2008). The primary challenge in terms of constructing effective polities in stateless societies is to understand that individuals within these societies are loyal to their own social and community group, not the state (Milliken and Krause 2002; Clements et al. 2007; Boege et al. 2008). As members of such communities, individuals are tied into networks of social relations and mutual obligations, and these obligations are much more powerful than a citizen's obligation to the state. People in stateless societies do not obey the rules of the state, but the rules of their group, leading to the development of more localized social, economic, and political institutions (Boege et al, 2008).

#### The Development of non-Weberian Order: Actors and Institutions

For any political order to emerge, political institutions must be developed. In stateless societies, informal institutions embedded within social norms constitute

the fundamental building blocks of political, social, and economic order (Fukuyama 2004). Because a functioning Weberian state is absent, institutions must arise organically from informal institutions embedded within social norms. In stateless societies, social groups like ethnic or kin-based communities, have developed various institutions to regulate social behavior. These institutions are then utilized to structure, shape, and channel political and economic power in these societies.

Institutions are self-enforcing, easily recognizable formal or informal rules which structure social interaction. They may be long-lived or persistent, but do not necessarily have to be so and any particular institutional arrangement will be recognizable as a coherent set of rules to the individuals acting within that institutional arrangement (Knight 1992; Knight and Johnson 2007). Institutions are the rules which structure any strategic game that individuals play (North 1990; Shepsle 2006). Institutions rest on the mutual expectations of individuals embedded within them - thus institutions are Nash equilibria. Institutions form as individuals coordinate on strategies that are mutual best replies to the strategies all other individuals are playing within some coordination game. In this sense, institutions are also indeterminate. Individuals can decide on any number of possible ways through which to structure relevant patterns of interaction, and hence, institutional designs represent coordination equilibria in the game theoretic sense (Knight and Johnson 2007; Calvert 1995; Calvert 1995b).

Institutionalism in political science has been studied through rational choice models and through application of game theory (Elster 1986; Hechter 1987; Morrow 1994; Becker 1976; Schelling 1960; Schelling 1978; Knight and Epstein 1996; Taylor 1987; Calvert 1992; Calvert 1995; Calvert 1995b; Lichbach 1998; Ostrom 1990; Ostrom 1998) as well as through historical institutionalism (Thelen 1999; Mahoney

and Rueschemeyer 2003). This dissertation engages with the rational choice institutionalist literature. Rational choice begins with the premise that individuals are rational actors, meaning that they seek to maximize their individual utility. Individuals, further, are strategic. They engage in action to obtain some goal. Individuals are endowed with tastes and beliefs that drive individual action to satisfy preferences. Further, individuals are assumed to have a complete and transitive preference ordering over all possible outcomes, allowing individuals to rank orderings of preferences.

Institutions arise, according to rational choice theorists, in order for political actors to realize mutual gains (Keohane 1984). That is, institutions are created to help actors realize payoffs to cooperation that are higher than any payoff each actor could have received in isolation. Institutions are sets of rules that actors coordinate and agree upon in order for each to realize mutually beneficial outcomes. According to a persuasive account, institutions are created by agents who are endowed with an uneven distribution of power (Knight 1992). The most powerful agents can thus shape institutional rules to suit their preferences, while utilizing that same power to ensure compliance from the less powerful individuals. Of course the less powerful are not merely coerced into joining an institutions, but receive some gains from joining, so agents can be said to have a choice in the matter.

Institutions condition the behavior of actors as well (Schelling 1960; Schelling 1978). By agreeing to abide by the rules of a particular institution, actors agree to forgo opportunities to take certain actions in exchange for accepting the rewards the institution provides. Individuals, for instance, will forgo dissolving the institution to act alone in exchange for the promise of payoffs that are higher than what they can attain by themselves. To ensure these rules are followed, institutions often have the

ability to monitor and sanction the behavior on noncompliant actors, increase the costs of noncompliance and increasing the rewards gained from remaining within the institution (Olson 1965; Hechter 1987). Hence, institutions generally are self-reinforcing. No individuals acting within an institution has any incentive to alter her behavior for fear of reducing her long run average payoff. Hence, according to rationalist theories of institutions, institutions are Nash equilibria.

Rational choice institutionalism in political science has spawned a vast research agenda. It's focus on institutions and their formation has done much to advance our understanding of political behavior from voting, to legislative behavior, to war and conflict, and ethnic networks (Downs 1957; Gamm and Shepsle 1989; Fearon 1995; Habyarmania et al. 2007). But there are limitations to what these theories can tell us about the formation of political institutions in stateless societies. Two problems arise when studying the development of institutions in these contexts. First is the problem of institutional formation. Institutions are normally studied as formed by political processes within traditional sovereign Weberian states. We understand that institutions arise in these states as the result of some bargaining process between individuals (Knight and Johnson 2007; Knight 1992). But we know very little about how this bargaining processes operates when political order has broken down. Further, we know extremely little about why certain institutions are chosen in these bargaining processes to structure social interaction rather than others (Schelling 1960, Knight and Johnson 2007; Kosfeld et al. 2009).

If institutions are the outcome of a bargaining solution arrived at by agents with a distribution of preferences over outcomes, the problem of choosing an institutional form to structure interaction is fundamentally a problem of social choice. Arrow (1951) has demonstrated that a multitude of equilibria exist in any

social choice situation, and that it may well be impossible to predict *ex ante* any one equilibrium<sup>1</sup> and further refined in the literature with advances like Mertens stable equilibrium (Metrens 1989), signaling games and the intuitive criterion (Cho and Kreps 1987), evolutionary game theory and evolutionary stable strategies (ESSs) (Maynard Smith 1982), divine equilibrium (Banks and Sobel 1987), Markov Perfect Equilibrium (Maskin and Tirole 1988), and finally risk dominance and payoff dominance (Harsanyi and Selten 1988). My argument here is limited to an analysis of choosing between multiple equilibria *all* of which are equally plausible given the strategies, preferences, and beliefs of all players. (Knight and Johnson 2007). Hence, the first task of crafting political and economic institutions is to craft a stable Nash equilibrium which will be optimal for all parties involved. But if a multitude of institutional arrangements are possible, why is one particular institution chosen while others are not? Game theory is extremely useful in specifying the conditions under which an equilibrium is stable, but it has trouble specifying why one equilibrium is chosen over any other when all may be equally possible. Worse, game theory's Folk Theorem proposes that in any repeated game any outcome is a possible equilibrium. Given this, no institutional form has presumptive warrant as *the* institutional form which will structure social interaction in any given setting (Knight and Johnson 2007). We are thus left with the unanswerable question of "why this institution and not another?"

As troubling as this first problem of institutional formation is, the second problem is even more troubling. If institutions are Nash equilibria, then by definition, no player within an institution has any incentive to change her behavior,

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<sup>1</sup>Of course it is unfair to claim that rational choice and game theory have no way to choose between different equilibria. There is a rich literature covering precisely how to choose from among multiple different equilibria in any one game. Concepts like Bayesian, Perfect Bayesian, and Trembling Hand Perfect Equilibrium were developed by (Harsanyi 1967) and (Selten 1975

for her behavior is optimal given the behavior of all other players. This is why institutions are self-enforcing. But if no individual will alter her pattern of behavior, how do institutions change? Commonly, institutions are seen to change due to exogenous shocks. Institutions may be stable for a great period of time, but outside forces can alter their makeup, leading to periods of punctuated equilibrium where institutions remain stable for a great while but occasionally and very rapidly, alter their structure. Yet, we should expect that these critical junctures, or change points, often occur when new conditions disrupt the specific mechanisms which previously granted an institution its stability (Grief and Laitin 2004; Hall and Taylor 1998; 266). That is, we should expect the mechanisms of institutional change to be at least partly endogenous to the institution itself. Yet if this is the case, the institution itself is not a Nash equilibrium, for its pattern of behavior is not stable. What is needed is a method to predict how an institution can change based on the behavior of individuals within it.

#### Evolution and Endogenous Institutional Change

If patterns of behavior that develop within an institution ultimately come to undermine that institution's foundation, or alter its function steadily and gradually over time, then the process that changed that institution must have been, at least partially, endogenous (Mahoney and Thelen 2010). Currently, however, rational choice scholarship, offers little guidance for developing a theory of gradual or endogenous institutional change. Greif and Laitin (2004), in perhaps one of the best - if not one of the only - attempts to develop a cohesive theory of endogenous institutional change from a rational choice perspective stress indirect institutional effects, or feedback effects, that either expand or contract the set of situations in which an institution is self-enforcing.

Their solution involves thinking about endogenous change as a redefinition of some of the exogenous parameters as endogenous parameters - or what they call “quasi-parameters”.

Their analysis can in this way account for the stability or breakdown of different institutional equilibria. But their framework does not make it clear how scholars would be able, *ex ante*, to predict which quasi-parameters are more likely to be affected by the operation of the institution (Mahoney and Thelen 2010).

Greif and Laitin (2004) provide a useful first start when thinking about endogenous institutional change, but their account does not go far enough in terms of endogenizing particular parameters. Their concept of quasi-parameters, while attempting to redefine formerly exogenous parameters like power, preferences, and the like, fails to fully account for a process by which certain quasi-parameters are endogenized while others remain exogenous. In order to truly account for a process of endogenous institutional change a mechanism must be specified that selects which quasi-parameters to endogenize and which others should remain exogenous. Here my theory makes a substantial improvement on Greif and Laitin’s by specifying a selection mechanism which determines which attributes of individuals are selected for or against in order to influence endogenous institutional change. This improvement is enhanced from an interdisciplinary literature from cultural anthropology and sociology regarding the concept of social or cultural evolution.

Recent research in sociology has demonstrated some promise in analyzing institutional change with theories centered on the concept of social and cultural evolution (Bowles 1999; Bowles 2004; Bowles 2008; Henrich et al. 2004; Carpenter 2005; Gintis et al. 2005). Contrary to the study of institutions in economics and political science, which is mostly focused on explaining the durability and

permanence of institutions, this sociological literature regards institutions as more dynamic and susceptible to processes of gradual change. Perhaps the most useful starting point for such an analysis of institutional change is to examine the interaction between institutions and the behavior of individuals and groups acting within them (van den Bergh and Stagl 2003). Commonly, these theories are referred to as evolutionary theories of institutional change, and they offer the best starting point for developing an economic and political theory of institutional change. Developing a theory of evolutionary institutional change, however, requires leaving behind many central assumptions of classic rational choice institutional analysis. Evolutionary theories of institutional change prescribe much larger roles to concepts like bounded rationality, individual and group selection processes, altruism, cooperation, and coevolution (ibid). Adopting an evolutionary perspective when studying institutions, however, does not imply an abandonment of rational choice principles. In fact, evolutionary theories derive their first premises from rational choice theories, but diverge mostly in their units of analysis. While traditional economic and political rational choice analysis takes the individual as central to the analysis, proscribes a strategy, and then examines the stability of that equilibrium strategy against the strategic behavior of other individuals with their own strategies, evolutionary theories examine groups consisting of large numbers of identical individuals and ascribe strategies to these groups. The following discussion highlights the similarities and differences between the two approaches.

Unlike traditional rational choice analysis, evolutionary theories place a group or population at the center of the analysis. A population is a group of arbitrarily large size composed of numerous identical individuals all playing a predetermined strategy. Populations playing different strategies then play their



predetermined strategies against each other, and the relative success of each strategy, generally measured in offspring, fitness, or utility, is recorded. Populations with higher long run average fitness tend to dominate less fit populations in repeated games, hence increasing in frequency within the larger metapopulation. Consider, for example, a simple predator-prey model - like the common hawk-dove game. Hawks are predators - they prey on the doves. Doves are peaceful, naturally, and so do not prey on hawks or each other. When a hawk meets a dove, the hawk kills the dove, but when a dove meets a dove - peace prevails and both doves survive. The same can be said for hawks - when a hawk meets another hawk, both back off to fight another day. The relative success of both the hawks and the doves depends upon their relative frequencies in the bird population. If doves are more common than hawks, they tend to meet more often, hawks meet doves less often, and hence gain less sustenance from kills and thus decline in frequency. If hawks are more common, doves will tend to do less well. The relative frequencies of hawks and doves in the population are determined by a natural selection process - in this case, the natural tendency for hawks to prey on doves.

Of course the development of political and economic institutions in stateless societies is more complex than can be modeled by a simple predator-prey model. The construction of institutions requires that individuals come to mutual understandings about the proper way to structure social, political, and economy interactions, and as already stated Arrow (1951) has demonstrated that it is very difficult to predict *ex ante* which institutional form will be chosen to structure those interactions. Evolutionary theory, however, can take into account a diversity of possible institutional equilibria by positing a underlying selection mechanism which addresses the fact that institutional change and creation do not occur in a vacuum

but instead are affected by economic, social and environmental forces (van den Bergh and Stagl 2003). The economic literature on evolution has tended to focus, unsurprisingly, on firms and technology rather than institutions (ibid), through important work has been done regarding how institutions evolve to solve collective action problems, especially common pool resource issues (Ostrom 1990). Economics has generally analyzed the behavior of individuals within institutions by focusing on how institutions shape individual behavior (Olson 1965; North 1990; Knight 1992). Institutions have been examined as constraining individual behavior by sharply limiting the feasible set of options an individual can take given existing institutional rules. Institutional change, if examined at all, is commonly regarded as a problem of control rather than an endogenous phenomenon (van den Bergh and Stagl 2003).

Evolutionary theories of institutional change try to capture the idea that there is a diversity of possible institutional equilibria for actors to select from. Moreover, institutions arise and change through endogenous process like the privileging of certain types of individuals within an institutions, institutional learning, adaptation, and cultural transmission (Bowles 1999; Bowles 2004; Boyd and Richerson 2010). Often these processes occur in response to changes in other areas of the economy or society, Hence, these theories are coevolutionary - they contend that institutions adapt, change, and evolve in response to changes in the external social, political, or economic environment, but that these social changes themselves may be - at least partly - due to the process of institutional change itself. Non-evolutionary rational choice approaches typically specify mechanistic changes that assume an unchanging structure below the population level - i.e. the individuals in traditional rational choice and game theory analysis do not change. Their preferences do not change and their strategies remain constant.

Inclusion of a changing population structure would, by definition, move these theories away from traditional rational choice analyses and into the realm of evolutionary explanations (Bowles 2004; van den Bergh and Stagl 2003).

If institutions are simply the underlying rules of the game that is played among or between populations of individuals, institutions can be said to have impacts on individuals and individual behavior. First, institutions can influence or constrain the behavior of individuals by expanding or reducing the feasible set of options that individuals may have to take. Second, institutions select among the diversity of individual behavior and preferences. For instance, if certain groups punish behavior they consider to be deviant, that behavior may be selected against by the institution, making it less common. Further, meta-norms may be present, which means that enforcers of a norm may be rewarded by non enforcers punished. If this is true, the behavior that norm represents might become more common over time. Third, interactions among individuals influence institutions through feedback effects. Again, punishment is an example. If non-enforcement of norms is punished, but individuals adapt to this punishment by always enforcing institutional norms, there would be no need of a punishment rule. Gradually, this aspect of the institution may decay due to disuse. Fourth, group selection among individuals within an institution has the power to endogenously alter that institutions makeup. If certain groups become more powerful due to a change in resource endowments, for example, they may choose to alter institutional rules to suit their preferences (Knight and Johnson 2007; Knight 1992). These groups then influence the makeup and composition of the institution by altering its rules. It is the task of an evolutionary theory to specify a mechanism through which an institution is likely to change.

A mechanism for selecting among groups in the population is needed. This mechanism would benefit, or select for, certain groups, while selecting against others.

In order to understand how selective forces within institutions can select for or against certain individuals, it is necessary to specify the types of individuals that comprise a population. Natural selection, in biology, favors certain types of organisms over others depending on environmental conditions. So it is with selective pressures in the evolution of social, political, and economic institutions. Selective pressures will favor certain types of individuals depending on environmental conditions. Ostrom (1990) has shown that group level pressure from endogenous sanctioning institutions within groups managing common pool resources select for types of individuals that conserve common pool resources. Henrich et al. (2005) analyze 15 small scale societies and discover that social groups more isolated from capitalistic markets display higher levels of in-group altruism than similar groups comparatively more integrated with such markets. Alchain (1950) contends that market forces exert an evolutionary pressure on individuals and groups. Analyzing economic firms, he contends that market forces affect their survival and that “those (firms) whose particular conditions happen to be the most appropriate of those offered to the economic system for testing and adoption will be selected as survivors” (Alchain 1950; 213-14).

Political science is beginning to understand that institutions can change gradually over time and endogenously. In perhaps the leading thinking on the subject Mahoney and Thelen (2010) attempt to develop a theory of endogenous institutional change. They contend that institutional change is a process directed by specific types of agents who either seek to revise or maintain the institutional status quo, and the presence or absence of veto points in a given institution. Institutions

with many veto points or veto players are unlikely to change, even with a high proportion of individuals who might seek to revise the structure of the institution. But institutions with few veto points and few revisionist actors are also unlikely to change. Institutions are most likely to go through a process of transformation given a high proportion of revisionist actors and relatively few veto points.

Mahoney and Thelen (2010) also contend that institutions have important feedback effects on the type of actors likely to emerge within given populations. By defining institutions as inherently distributional in nature, Mahoney and Thelen contend that the institutional distribution of resources affects the emergence of certain types of agents in the population. Types of individuals negatively affected by the distribution of resources are more likely to attempt to become revisionist agents seeking to alter institutional rules in their favor. The characteristics of an institution, combined with aspects of the external environment shape the likelihood of specific agents of change emerging in the population - and hence the direction of institutional change.

Mahoney and Thelen's work represents a useful starting point for conceiving of institutional change as an evolutionary process. Their conception of change agents is similar to the concept of types of agents in evolutionary theory (Bowles 2004; McElreath and Boyd 2007). The distributional consequences of a particular institutional structure is akin to long run average payoffs in evolutionary theory. In both evolutionary theory and Mahoney and Thelen's account of institutional change, long run average payoffs - or distribution - affect the probability of certain types of individuals becoming favored by the institutional environment. It is difficult, however, to predict which type of agent will be likely to emerge and change an institution in Mahoney and Thelen's framework. Mahoney and Thelen focus

their attention of winners and losers in terms of distribution, but stress that moving beyond a focus on winners and losers is necessary to develop a truly predictive model of institutional evolution. Specifying a selective mechanism which works directly on a population itself provides a means of predicting not only a means to predict which agents are likely to change an institution, but also provides a way to predict in what way that change will occur. By specifying a mechanism which increases or decreases the relative proportions of types of individuals within a given population, what strategies those individuals play, and how those strategies affect social behavior within that institution, evolutionary theory provides a way to develop a theory of truly endogenous institutional change.

#### Governance Evolving: Little Leviathans

To be considered an effective and consolidated a state must, at a minimum, accomplish two goals. It must provide physical security to its population, usually in the form of a military or police force, and it must satisfy the material and economic needs of its citizens (Tilly 1975; Migdal 1988; Olson 1993; Mampilly 2011). States must consolidate power from competing forms of political authority whether those are city-states, tribal and kin networks, ethnic groups, or landlords and rich peasants (Spruyt 1994; Migdal 1988; Herbst 2000; Acemoglu 2005) in order to claim the mantle of sovereignty. In order for the Leviathan to consolidate its power, these competitors must disavow their claims to rule and cede their political authority to the state. Critical, and prior, to the existence of a well functioning state, then, is a state's "capacity" or its monopoly over the legitimate use of violence (Weber 1946; Acemoglu 2005). Yet in many weak states, this capacity is absent, and a multitude of political actors compete for political power.

The development of political order in modern weak states is mirrored in the development of European nation states. The sovereign state was not always the locus of political power. Rather, European nation-states had to compete against a multitude of potential challengers for political power. From city-states, to merchant guilds, and even the Catholic Church, the nascent sovereign leviathan was not guaranteed to consolidate political power from these other competitors (Tilly 1975; Spruyt 1994; Greif 2006). So it is today in modern weak and failing states. The state is but one locus of political power, and one that does not necessarily command the loyalty of its citizens (Migdal 1988; Boege et al. 2008). Strongmen, tribal elders, religious leaders, and other social actors all compete with the state for political power. Governance is evolving in weak states. While the state may be ineffective compared to a Western OECD ideal, and while violence and conflict may be more prevalent in weak states, anarchy is not a permanent feature of these societies, as stated earlier in this chapter. The reality in these weak states is far more complex than the picture painted by Fukuyama (2004) and Krasner and Pascual (2005). Competition for political power has given rise to what might be called “little leviathans”, sources of political authority that aspire to achieve a monopoly over the use of force in society, but so far have failed to do so. As in the biological world, selective pressures select for or against these little leviathans. The task for any theory of governance in these societies is to specify causal mechanisms that might predict or explain why certain little leviathans are selected for while others are selected against.

The notion that certain forces might select for certain political forms which are better able to adapt to environmental conditions, and thus better able to consolidate political power is not a new one. Tilly (1985; 170) famously wrote “

states make war and war makes states”, by which he was referring to the process whereby states consolidated political, economic, and social power by engaging in war making, which required, in turn, the construction of extractive institutions which could tax citizens to raise the required revenues to conduct extended military campaigns. Waltz (1979) describes the distribution of military capabilities among states in the international system as a selective mechanism by which militarily strong states are selected for while militarily weak states are selected against. North and Thomas (1973) describe the evolution of property rights regimes and economic development in Western Europe as depending on environmental factors like the bubonic plague and variable rates of population growth. Greif (2006) describes the evolution of the modern economy as co-evolving among and between sovereign rulers and powerful trading guilds. Powerful trading guilds would not trade with rulers who could not credibly commit to refrain from robbing guild merchants. As trading guilds became more powerful, this threat became more credible from the guild’s standpoint and rulers would implement rules credibly committing to grant the trading guilds freedom of trade. Rulers that made such contracts grew in power and strength, while rulers who opted for short term gains by robbing merchants grew less powerful as merchants refused to trade with those rulers. The rulers strengthened by economic expansion gradually displaced the weaker sovereigns through warfare and economic competition.

Axelrod (1984) has shown that cooperation among individuals can emerge in the absence of a centralized political authority. If individuals expect social interaction to persist for an extended period of time, they may choose to forgo immediate short-term gains, and behave cooperatively if the expected gains from cooperation are large compared to immediate short-term payoffs. In one of the only



explicit formulations by political scientists, Akcay et al. (2010) examine the emergence of cooperation between various animal species. Calling such cooperation institutions, the authors examine how biological institutions develop among various animals and draw parallels to the development of political institutions. The authors call for the development of evolutionary theory in political science by shifting current thinking from its present focus on considering each individual as choosing their strategy alone in a fixed game to considering the organization of a social system that emerges from the interactions between individuals. Doing so, the authors contend “promises to be groundbreaking in leading to new questions and sneers in out understanding of biological (and political) organization” (Akcay et al. 2010).

A cornerstone of political science research has always centered on the development of states. States are the most commonly recognized and analyzed political institutions. Political science is nothing if not the study of the state. In modern society, however, political science must learn to deal with political forces and structures that do not conform to commonly recognized state centric archetypes. Many states throughout the world do not conform to the ideal type of the sovereign, territorial, Weberian state. If political science as a discipline is to remain relevant, it must develop theories of politics that rest on conceptual foundations other than the state. Political science must come to deal head on with societies and forms of political order that look and operate differently from the current modes that inform out theories of political behavior. This dissertation, which takes seriously the contributions of evolutionary theory from fields as diverse as economics, sociology, and biology, represents an attempt to seriously grapple with the development of political order in a stateless society. The following chapters will

lay out a model of institutional genesis and evolution in a stateless society and subject this model to extensive quantitative and qualitative examination and testing. This dissertation will demonstrate the validity of evolutionary theories for the study of political science through an examination of non-Weberian governance by the Jewish community of Palestine from 1920-1948.

## Chapter 3

### BETWEEN COMMUNITY AND MARKET: INSTITUTIONS AND THE EVOLUTION OF SOCIAL BEHAVIOR

Such were the Blessings of that State;  
Their Crimes conspired to make them Great;  
Thus every Part was full of Vice;  
Yet the whole Mass, a Paradise;...  
The worst of all the Multitude  
Did Something for the Common Good.

- Bernard Mandeville *The Fable of the Bees, or Private Vices, Publick Benefits (1705)*,  
quoted in Bowles (2004)

[The bourgeoisie] has resolved personal worth into exchange value, and in place of the numberless infeasible chartered freedoms, has set up that single, unconscionable freedom - Free Trade. In one word, for exploitation, veiled by religious and political illusions, it has substituted naked, shameless, direct, brutal exploitation.

- Karl Marx and Frederich Engles *Manifesto of the Communist Party (1848)*

#### The Evolution of Non-Weberian Political Orders

It is the goal of this dissertation to examine the development and evolution of non-Weberian governance in stateless societies. The preceding chapter described the observational, methodological, and theoretical problems with describing systems of governance that are not state-centric. This chapter will introduce a novel way of examining the construction of political order in stateless societies. To that end, this chapter introduces a new way of examining the formation of political institutions:

evolutionary game theory. Evolutionary game theory examines populations of agents rather than the traditional strategic and rational individual. Evolutionary game theory is ideally suited to examine the question of how the institutional structure an individual finds itself in influences the strategic options available to that individual. But, rather than examining what that lone individual does, evolutionary game theory examines what a population comprised of many identical copies of that individual can accomplish given institutional constraints. Because the development of political, economic, social, and military institutions are not created by well known legislative and governmental processes in stateless societies, they must arise organically from the interactions of populations of individuals. Evolutionary game theory allows for an examination of exactly this kind of interaction.

This dissertation examines the settlement of kibbutzim and moshavim throughout the land of Palestine from 1920-1948 as a case study of non-Weberian governance. The Jewish community of Palestine, the *Yishuv*, constructed these agricultural settlements to provide for both the development of Jewish economic markets and the provision of Jewish military defense - two public goods traditionally supplied by sovereign and territorial, that is Weberian, states. This chapter lays out the mathematical model which demonstrates how the kibbutzim and moshavim came to be endowed with their particular comparative institutional advantages: the moshavim providing economic growth and development, the kibbutzim providing military defense. The following two chapters will systematically test the hypotheses laid out by this evolutionary model with both quantitative statistical analyses and qualitative historical evidence. The model presented in this chapter will demonstrate that the ability of the kibbutz to provide costly and jointly produced public goods is the result of an institutional structure

which rewarded reciprocal altruism among kibbutz members, while the ability of the moshav to provide for the economic growth of the Jewish community was due to an institutional structure that rewarded self-interested and self-regarding behavior designed to maximize short-term individual utility. This chapter begins by examining how one causal factor - the level of integration a given settlement had with external markets - built up an institutional structure which rewarded either self-regarding utility maximization, or pro-social reciprocal altruism.

#### Market Integration in the Kibbutzim and Moshavim

Zionist settlement in Palestine had one overarching goal: to settle as many Jewish immigrants across the land of Palestine in order to increase the area of Palestine under Jewish control. In order to do this, the proto-state institutions of the Jewish community, especially the Jewish National Fund and Jewish Agency, supported the construction of two different rural agricultural settlements, the kibbutzim and the moshavim. While these two types of settlement ended up differing from each other in substantial ways, they were originally conceived of as slightly different ways to achieve the same ends. That is, these institutions were originally similar, differing only in one key respect. The kibbutz was designed as a communal institution while the moshav was cooperative. The moshavim and kibbutzim were both organized to ensure self sufficiency in food production, cooperation in providing services, mutual aid in farm cultivation, a prohibition on hiring outside labor and working outside the settlement, and democratic governance of the community (Haruvi and Kislev 1984; Weintraub, Lissak, and Azmon 1969). Although these settlements began similarly, they gradually became more different over time as variation in the levels of market integration led to the evolution of two different norms of social behavior within these settlements.

Ultimately these different behaviors altered the structures of these settlements, creating two different institutions with different rules governing social behavior.

The kibbutzim and moshavim differed from each other with respect to how integrated they were with external economic markets. The largest difference in market integration is attributable to the distinction between the communal nature of the kibbutz and the cooperative institutions of the moshav. In the kibbutzim all buildings and means of production were communally owned, and all economic activities were communally operated (Maron 1993). Most members of the kibbutz worked within the communal territory of the kibbutz and most of the work carried out within the settlement was carried out by kibbutz members themselves (Weintraub, Lissak, and Azmon 1969). Labor in the kibbutz was regarded as having a value of its own that could not be directly translated into monetary payments (Near 1992a). Kibbutzim were also forbidden from hiring outside labor and kibbutz members were generally not allowed to work outside of the settlement, although this did sometimes occur. Economic production in the kibbutz tended towards greater participation in group activities, such as work groups (Maron 1993). Members were selected into different economic branches by kibbutz committees governing specific aspects of social and economic life. Theoretically, all members sat on at least one committee, ensuring the kibbutz was completely self-governed (Near 1992a, Ben David 1964). All income received by the kibbutz was shared communally, and the needs of members were provided for by the commune on an egalitarian basis (Ben David 1964). While the kibbutzim grew agricultural produce and produced manufactured goods which were sold in the broader Jewish product markets, they always maintained a clear dividing line, keeping outside markets separate from communal life (Rosner 1993).

Kibbutzim were also isolated from external markets by virtue of where they were constructed. Kibbutzim were built primarily in rural areas, away from the developing towns and in swampy, rocky, or hostile geographic areas far from urban centers (Criden and Gelb 1974; Near 1992a). Only thirty-one percent of kibbutzim constructed from 1920 to 1948 were constructed in the fertile coastal plain and Jezreel valley regions. The vast majority were built along the border regions of Palestine and in densely populated Arab areas including the Galilee and the Negev desert. These areas were often initially ill suited for agricultural purposes, but because they ran along the borders of Palestine, they were areas that were at high risk for conflict as they were mostly populated by Arabs, and also included likely invasion routes which other Arab states could, and did, use to invade Jewish territory. Over time, however, the kibbutzim did manage to turn profits, even in inhospitable areas. For instance, agriculture accounted for fifty percent of income for all kibbutzim in 1939 and the kibbutzim doubled the amount of land under farm cultivation from 5,600 hectares in 1929 to 11,350 hectares by 1936. Although the kibbutzim were settled in areas generally initially unsuitable for cultivation, their agricultural profits increased steadily from the 1920s to the late 1940s (Near 1992a,b).

Kibbutz members themselves were also isolated from market mechanisms due to the egalitarian institutions of the kibbutzim. Hence the rules of social behavior in the kibbutzim emphasized egalitarianism, reciprocity, and altruism over self-interest. One kibbutz member, when interviewed about material compensation in the kibbutz replied, “Every one of us works willingly, some of us have to do things we do not like, but we do them with good grace. This business of ‘I’ve got it coming to me, I deserve some sort of reward’ is irrelevant. Our people do not go looking for material

gains. The coin in which we are paid is the knowledge that we have done our share for the community.” (Criden and Gelb 1974; 60). The kibbutzim achieved strict equality among members through mechanical means. Income was distributed to all members equally. Further, since all income was communally distributed, the buying and selling of all goods in the community was also communally organized, so that no one member owned any private property nor sold anything for her own profit.

The moshavim, on the other hand, were more tightly integrated into external markets. Economic functions in the moshavim, including marketing, buying, and selling, were cooperatively, rather than communally organized (Ben David 1964). There were provisions for mutual aid, the provision of cooperative services, and obtaining credit for the purchase of equipment and consumption goods, as in the kibbutzim. Since, however, each family in the moshav lived in a separate house and was a separate unit of consumption and production, communal life in the moshavim was much less intense than in the kibbutzim (ibid). In contrast to the mechanical equality of the kibbutz, more latitude was given to the individual in the moshav. Each individual was allotted a parcel of land which was worked individually for the benefit of that individual and his or her family only (Baldwin 1972). Economic stratification among members in the the moshavim, though kept within some limitations, was higher than in the kibbutzim.

Because individuals worked private plots of land for their own benefit, or the benefit of their immediate families, economic stratification naturally emerged based on variation in wealth. This led to a stratification of those with means in the moshav, and those without, weakening communal bonds of solidarity (Weintraub, Lissak, and Azmon 1969; Abarbanel 1974; Baldwin 1972).



The cooperative aspects of life in the moshavim gradually grew less important over time. Since each family was a separate economic unit which responded directly to its own economic needs, cooperative buying and selling declined in importance as each individual began responding directly to market mechanisms (Abarbanel 1974). For instance, the cooperative credit institutions which were designed to assist the moshav in the buying of capital were gradually abolished because there was a direct connection between the economic situation of each individual member and the credit granted to him or her on the basis of how much profit they were able to generate as an economic unit of production (Weintraub, Lissak, and Azmon 1969). Over time individuals purchased the capital they required on an individual basis.

Further, the moshavim allowed the use of hired labor, something that was considered taboo in the kibbutzim. The settlers in the moshavim felt that using only their own labor was insufficient for their desired standard of living which was no longer “simple, frugal, and unostentatious” (Weintraub, Lissak, and Azmon 1968; 143-144). To remain within the life style they had grown accustomed to, moshav members would hire workers to cultivate their farm while the moshav member would work outside of the moshav to acquire private capital. This private capital would then be used to further economic differentiation among members of the community. Serious as the rising inequality was, it also affected other aspects of life in the moshavim.

Economic inequality also affected cooperation among members in the moshavim. The economic structure of the moshavim, where individuals pursued their own immediate self-interest, meant that cooperation among individuals occurred only on a voluntary basis (Weintraub, Lissak, and Azmon 1969; Abarbanel

1974; Baldwin 1972; Ben-David 1964). During the 1930s, only ten years after the founding of the first moshav, it was agreed by the national leadership of the moshavim that personal and voluntary contributions to mutual aid funds were insufficient to cope with problems in the settlements such as settlers falling ill and other members having to tend their farms as they recovered. Hence, a formal and institutionalized provision of mutual aid would have to be agreed upon and administered by the moshavim at the national level (Weintraub, Lissak, and Azmon 1969). This institution broke down as well (Abarbanel 1974). Disputes arose because some members were seen to be taking advantage of the availability of this aid when it was felt that they had sufficient labor from within their own families. These disputes tended to erupt between members with sufficient labor resources, who were reluctant to assist others, and those with insufficient resources who were continuously pressured because of their lack of resources. The former group became reluctant to help the latter because it meant more work on their part, especially when they perceived the other group was merely taking a free ride (Abarbanel 1974; 172).

Free riding naturally plagues cooperative and communal endeavors. Individuals must give of their own resources including time, labor, and money, to realize communal and cooperative goals such as providing for the economic well being of the community or protecting the settlement from attack by hostile forces. Because these goals cannot be realized by the actions of a single individual, the entire community must cooperate to realize these goals. Each individual's contribution to this goal, however, is small, and therefore the dominant strategy for any given individual is to invest as little personal resources as possible while letting the burden of providing the collective resource fall on every other member. If each

individual acts this way, however, no collective good is likely to be provided. The kibbutzim were able to overcome this free rider problem, but the moshavim did not. Market integration in the moshavim influenced individuals to behave in a self-regarding manner over time, leading to the break down of cooperative behavior. Because the kibbutzim were isolated from these markets, members were not incentivized to follow the self-regarding logic of the market. The self-regarding behavior of the moshavim, while hampering the provision of security, ultimately enhanced the production of economic growth and development in the Jewish community. The pro-social behavior present among kibbutz members allowed them to overcome collective action problems and engage in costly collective action to provide military security. The next section explains how such behavior developed.

#### Market Integration, Social Behavior, and Public Goods

Varying levels of market integration in the kibbutzim and moshavim led to the evolution of two different stable patterns of behavior: one, typified in the kibbutzim, was pro-social and marked by high a high degree of reciprocity. The other, institutionalized in the moshavim, was self-regarding. Moshav members tended to shirk cooperative duties in favor of maximizing their own self interest. These two different patterns of behavior gave the kibbutzim and the moshavim comparative institutional advantages (Hall and Soskice 2001) in the production of two different public goods. Because of their institutionalized pro-social norms, the kibbutzim evolved a comparative advantage in producing cooperatively, or jointly, produced public goods (Hechter 1987). Because the moshavim evolved an institutionalized pattern of self regarding behavior, they developed a comparative advantage in producing public goods through decentralized and private mechanisms.

This dissertation analyzes the production of two particular public goods by these settlements: security and economic development.

Public goods can be produced in two ways. Coordination to produce public goods can be achieved through market mechanisms such as prices (Demsetz 1970; Milgrom and Roberts 1992; Kreps 1990; Berstrom, Blume, and Varian 1986), or through group-based patterns of production which rely on the distribution of selective rewards or punishments to properly incentivize individuals to follow costly production rules (Olson 1965; Hechter 1987; Ostrom 1990). Both economic development and security are public goods. No individual can be kept from enjoying the benefits of higher levels of economic growth, nor can her enjoyment of such growth impede any other individual from similar enjoyment. The same can be said for security. A nation's army protects everyone in that nation, regardless of if they paid their taxes or not the previous year. Further, because the military protects one person, it protects everyone.

While economic development and security are both public goods, they are provided through different mechanisms. Economic development is provided through the decentralized and uncoordinated actions of self interested individuals. This can be shown through the Fundamental Welfare Theorems of economics which demonstrate two results. First, an equilibrium generated by market competition always yields a Pareto efficient allocation, and second, any such allocation is an equilibrium (Knight and Johnson 2007; Bowles 2004, Chapter 6; Milgrom and Roberts 1992). The "invisible hand" of the price mechanism produces equilibria that cannot be improved upon (Kreps 1990; 200). Individuals act only to maximize their narrow self interest, yet the whole system of behavior results in the efficient allocation of goods and services (Milgrom and Roberts 1992; 62).

This result has long been understood in economics, as the quote from Madiville at the beginning of this chapter shows.

Economic development is achieved through the production and consumption of private goods which are fully excludable and rival in consumption. Because of the nature of these private goods, it is sufficient to establish that under conditions resembling those assumed by the Fundamental Welfare Theorems, these goods will be supplied in an efficient manner because the exchange among actors resulting from these economic transactions is mutually beneficial. The price mechanism of the market will naturally match producers who wish to sell at a certain price with buyers willing to buy at a particular price. In situations approximating perfect competition where large numbers of buyers and sellers exist and goods are relatively homogenous, as is the case with most markets for agricultural goods produced by the kibbutzim and moshavim, the equilibrium that the market will tend towards ensures all buyers are matched with respective sellers and the market clears. Social welfare, a public good, is thus maximized through nothing but the uncoordinated actions of self interested individuals.

Markets thus achieve the maximization of benefits for individuals producing private goods. But markets also determine the institutional structure of economic and social organization. When any two actors perceive they can both benefit from mutual exchange in a marketplace, they must decide on the rules which structure that exchange. Some of these rules govern the nature of the exchange that will take place, what price an individual will sell at, what constitute a “fair” price, and so on. Out of these agreements arise social institutions which facilitate the achievement of mutually beneficial outcomes.

But because institutions are indeterminate, they can take on any form which is difficult to predict *ex ante*. Market competition serves as the selection mechanism that determines which institution the actors will coordinate on. It selects the institutional form on the basis of the “fitness” of individuals, where fitness is akin to total utility gained from any transaction. Markets will select equilibria to maximize utility gains for each individual. Since markets themselves provide the greatest benefit for individuals under competition, the institution of exchange for private goods will, over time, converge towards the institutional setting of the market itself, because it provides the greatest long-run fitness to any particular individual (Knight and Johnson 2007). Under conditions of market competition, individuals receiving greater compensation from their actions survive, those that do not disappear (Alchain 1950). In this way, the decentralized and uncoordinated actions of individuals in a marketplace can provide particular public goods. Economic growth and development is one such public good.

The production of public goods marked by jointness in production, here exemplified by security, requires different mechanisms. Relying on price or other market mechanisms is insufficient. While price mechanisms can efficiently compensate individuals who produce consumable and capital goods which serve to increase economic development, price mechanisms cannot always effectively compensate individuals who provide public goods which are marked by jointness in production. This is the case with security. An example not unlike the early days of Zionist settlement in Palestine is given in Hechter (1987). Imagine a large number of settlers dwelling in tents and lean-to shacks. Land is plentiful and good for farming. There is one reoccurring problem however. Roving gangs of Bedouin and Arab bandits occasionally steal the settler’s crops and animals and even kill some of

the settlers. Each incident causes severe economic losses to the settlement. In order to prevent these thefts from occurring, the settlers band together in a protective defense association. The association which arose in the kibbutzim was known as, *HaShomer*, or, the guards. The guards took turns participating in round-the-clock surveillance of the settlement to ensure security in the event of another raid. The formation of this protective association, however, did not imply protection will automatically be provided. The security of the settlers was a joint good; its production was only assured when each member lived up to the obligation to stand watch. The settler who fell asleep on guard duty risked the security of the whole settlement.

Joint goods are goods that individuals desire, but cannot provide at all, or as efficiently, through their own individual action (Hechter 1987). Joint goods, therefore must be provided in the context of a social group with a minimum of at least two people. The production of joint goods, like private goods, ultimately rests upon production rules, or institutions, that individuals create. But, rather than linking individuals with market mechanisms like prices, these institutions enable group members to overcome coordination problems by linking actors with specific activities that are designed to assist with the production of the joint good (Hechter 1987). It is well understood that because of the inherent jointness of supply and nonexcludability conditions inherent in jointly produced public goods, these goods will tend to be undersupplied if individuals act according to their own self interest. This is the basis for the free rider problem discussed above. The way to overcome this problem is to develop institutions to ensure individuals will engage in collective action. But if institutions are indeterminate, how can we predict what kinds of institutions will be chosen to ensure individuals comply?

Institutions in this instance are created from the coordinated actions of multiple individuals rather than from the ephemeral pairwise meeting of two anonymous individuals in a market. Like the production rules agreed upon in the case of the market, these institutions provide rules that structure the exchange of goods. Rather than exchanging private goods, individuals in these institutions exchange compliance with some costly production rules for access to some desired joint good, like security. For instance, the settlers living in the valley must give of their time and effort to ensure the security of their settlement. How do institutions ensure that individuals will comply with these production rules given the natural temptation to free ride? A well established literature (Olson 1965; Hechter 1987; Ostrom 1990; Lichbach 1996; Boyd et al. 2003; Yamagishi 1986, 1988) concludes that groups must be able to effectively monitor the behavior of members and punish those members who refuse to comply with rules governing the production of the joint good. If a group is able to single out members who are not compliant, they can dole out punishments which induce individuals to cooperate with production rules in the future. The more public these punishments are, the more other individuals will voluntarily choose to follow production rules (Hechter 1987).

Yet these types of institutions may not develop everywhere. As with the case of the exchange of private goods to maximize economic development and social welfare, markets also affect the scope of possible institutions that can be created to provide joint goods. Since the monitoring and punishing institutions needed to ensure compliance are also public goods (Yamagishi 1986, 1988, Hechter 1987), it is not immediately apparent how these institutions are provided. One way to solve the second order free rider problem is to examine how the institutional context an individual finds herself in affects her propensity to follow the directives of those



institutions and cooperate in collective action dilemmas. The model, developed in the remainder of this chapter, explores how market integration can alter the social behavior of large groups of individuals by affecting the distribution of cooperative traits in that population. By influencing individuals to become more self-regarding over time, market integration reduces the possibility that cooperative institutions will be created. By the same token, it will make economic transitions based on market principles more likely. The following discussion provides the bases for the following hypotheses.

### *Hypotheses*

**Hypothesis 1:** Market integration influences the evolution of self-regarding behavior as markets reward those individuals who maximize their own self-interest. Settlements where such behavior was common evolved the ability to efficiently produce consumable and capital goods necessary to grow and develop the Jewish economy.

**Hypothesis 2:** Market isolation influences the evolution of pro-social behavior as institutions can develop in the absence of markets to punish individuals for deviating from cooperative behavior. Settlements where pro-social behavior was common became effective providers of military security for the Jewish community.

### The Model

Imagine<sup>1</sup> a group of arbitrary size  $N$ . Individuals from this group interact with each other over the course of time, so that the interactions are repeated. Assume that there are two types of individuals in the population comprising  $N$ : *pro-social*, and *self-regarding* types. Types in this model are akin to strategies in a traditional game theory model. Pro-social types cooperate initially and then cooperate if other

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<sup>1</sup>This section closely follows the logic developed in McElreath and Boyd (2007)

individuals also cooperate. Pro-social types also punish individuals who defect against them. Hence, pro-social types cooperate with cooperators, and punish defectors even at a cost to themselves (Boyd et al. 2003). The first step in any model of cultural evolution is to define a replicator equation to allow the distribution of types within the population to change over time (Weibull 1995; Boyd 2004; McElreath and Boyd 2007). I will use these replicator equations to produce two equilibrium populations distributions, and will then show how these two population equilibria facilitate social behavior that enhances the provision of joint goods like security or private goods necessary for economic growth.

To examine the evolution of behavior in the kibbutzim and moshavim, a biological metaphor may be helpful. The first kibbutz, Degania, was founded in Palestine in 1910. The first moshav, Nahalal, was founded in 1921. Many of Nahalal's founders were settlers who had previously lived in Degania (Klayman 1970). If Degania is thought of as the nucleus of Zionist agricultural settlement in Palestine, it produced two progeny, other kibbutzim like Degania, and moshavim, like Nahalal. Both settlement types trace their origins to the original settlers at Degania. Hence, the population of Degania contained both self-regarding and pro-social types of individuals. The mechanism which split Degania in two was a debate over the communal nature of Degania. The founders of Nahalal left Degania because they were unhappy living according to the communal rules and wanted greater individual freedom, including the freedom to own private property and engage in production for their own families, rather than the commune as a whole. Hence, the debate which split the nucleus of Zionist settlement into two different institutions never to meet again was a debate regarding how integrated individuals wanted to be with external markets.

The model developed here is a simple evolutionary model with only one exogenous variable affecting the distribution of the two populations at any time. Individuals with specific traits are more likely to survive given the impact of the exogenous factor. In order to analyze the effects of this factor, market integration, on the distribution of types over time we need to specify how individuals with particular traits survive from one time period to the next. Survival of types is based on diffusion of behavior through social learning. The replication of traits within the population is frequency dependent, with more common traits being favored. As stated above, market integration rewards self-regarding behavior. Thus, self-regarding individuals are favored by those selective forces and tend to increase as a share of the population in settlements more integrated with economic markets.

Other individuals learn to become self-regarding through discovering the more rewarding self-regarding strategy. They realize the higher fitness of self-regarding types and so switch from being pro-social to becoming self-regarding. The reverse is also true if markets do not provide strong selective pressures.

The process of differential replication among types of behaviors is commonly modeled using a set of equations referred to as replicator equations, or replicator dynamics (Boyd 2004). Replicator equations are deterministic monotone non-linear functions used to model replication of types in a population. These equations allow the fitness function, which can be thought of as a payoff function, to incorporate the distribution of types within the population, rather than fixing the fitness of a particular type as constant. Replicator equations give a complete account of movements in populations based on empirically plausible assumptions about individual behaviors and on account of the details of social interactions within the population (Bowles 2004).

First, create a state variable,  $p$  to keep track of the proportion of pro-social types in the population. Commonly, the number of state variables is one less the number of types in the population. Since there are two types, there is one state variable  $p$  which tallies the proportion of pro-social types in the population. the value  $(1-p)$  is the proportion of self-regarding types, so one variable is sufficient to describe the composition of the system at any time. In this evolutionary model, only one evolutionary force is at work. In order to deduce the long-term effects of market integration, I specify how individual types survive from one generation to the next. Let  $p$  be the frequency of pro-social types in the population at time  $t$ . Thus,

$$p = \frac{\#pro-social}{n}$$

where  $n$  is simply the number of individuals currently in the population. Since  $p$  is a proportion, I can rewrite the above equation as  $np$  and the number of self-regarding types is  $1-(np)$ .

Next, I introduce a selection mechanism. This is represented simply by the probability that an individual of a certain type will play again in the next round. Let  $V_{ps}$  and  $V_{sr}$  be the probabilities that individuals of a pro-social and self-regarding type will play again in the next round. The probability  $V$  is akin to payoffs to individuals in a traditional game theory model. Because I am not interested in individuals, but types in this model,  $V$  is a probability given to a certain type of playing again. I want to analyze under which conditions individuals of a specific type are more likely to play again next period. With this probability specified, I can do a census for each type. The number of pro-social types will be  $npV_{ps}$ . The frequency of pro-social types in the population is given by  $p'$ , which is equal to

$$p' = \frac{npV_{ps}}{npV_{ps} + n(1-p)V_{sr}}. \quad (3.1)$$

After selection, those individuals who play in the next round “reproduce”, with types receiving a higher value of  $V$  reproducing at a higher rate. Reproduction of individuals in the model occurs when, if an individual has lasted into the next round with probability  $\delta$ , it creates an exact replica of itself. Let the number of copies created by an individual be  $z_{pr}$  or  $z_{sr}$ . I can then rewrite  $p'$  as

$$p' = \frac{npV_{ps}\delta(z_{ps})}{npV_{ps}\delta(z_{ps}) + n(1-p)V_{sr}\delta(z_{sr})} \quad (3.2)$$

Equations like equation 2 are called a recursion, and it allows for the application of per-generation effects of evolutionary forces over any number of possible generations. For instance if the frequency of pro-social types in the population in generation 1 is known, i.e.  $p'$ , then it is possible to calculate the frequency of pro-social types in generation two, call it  $p''$ , by substituting  $p'$  into the equation in place of  $np$ . Often it is easier to represent these events using a difference equation which yields the change in frequency after one generation, rather than specifying the new frequency after each successive generation. Begin by subtracting the frequency of pro-social types at the start of the generation,  $p$  from each side of the recursion

$$\Delta p = p'' - p' = \frac{pV_{ps}\delta(z_{ps})}{pV_{ps}\delta(z_{ps}) + (1-p)V_{sr}\delta(z_{sr})} - p$$

Which after some algebra can be written as:

$$\Delta p = \frac{p(1-p)(W_{ps} - W_{sr})}{\bar{w}} \quad (3.3)$$

where  $W$  is equal to  $V\delta(z)$  and  $\bar{w}$  is equal to  $pW_{ps} + (1-p)W_{sr}$  and represents the average fitness among both types in the population<sup>2</sup>. This difference equation is commonly referred to as the replicator dynamic (Taylor and Jonker 1978) for viability selection. This equation provides us with useful information. It reveals how natural selection, in this model represented by market integration, changes the frequency of types in the population. The first part of the equation  $p(1-p)$  is the variance among types in the population. When either type is common the resulting product is small suggesting natural selection has little effect in populations where one type dominates. The variance is maximized when both types are equally common so that  $p = 0.5$ . Natural selection is a culling process and it acts on types in the population when there is more to cull (McElreath and Boyd 2007). The second part,  $\frac{W_{ps}-W_{sr}}{\bar{w}}$ , is simply the proportion increase or decrease of self-regarding or pro-social types compared to the other. If pro-social types are more favored than self-regarding types, then they will increase in frequency in the population for each generation as long as there is still some variation among types. The converse is also true.

The model provides the long run consequences to types given the influence of market integration. The recursion equation defined above is a representation of how events in the lives of individuals change the distribution of types over one generation. Recall that the game these types are playing is repeated for many generations. Hence, the model predicts long run effects. One way to understand

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<sup>2</sup>The value of  $\bar{w}$  does not affect selection among types.  $\bar{w}$  is simply the average fitness of both types in the population. What drives selection among types is the fitness to each type, represented by  $W$ , and the variance between types.

these effects is through equilibrium analysis which is a process of deriving values of the state variable,  $p$ , for which the system does not change from one generation to the next and examining if the system moves back to these values if perturbed by a slight amount (Weibull 1995). Not all equilibria in evolutionary models are stable. The unstable equilibrium defines the boundary of the *basin of attraction* between two stable equilibria (McElreath and Boyd 2007). A basin of attraction of a stable equilibrium is the set of initial conditions for which that equilibrium is stable (Bowles 2004; Weibull 1995). When there is more than one equilibrium, as there will be in this model, I need a way to determine which equilibrium is the more likely evolutionary outcome. Utilizing basins of attraction is a good way to determine candidates for stable equilibria.<sup>3</sup>

### *Equilibrium Analysis*

Equilibria can be found by deriving the frequencies at which  $p'' = p'$ . I will label these equilibria  $p^*$ . I find these equilibria by setting the recursion equation equal to zero which finds the values of  $p$  for which the frequency of  $p$  is the same from one generation to the next. Call this equilibrium frequency  $p^*$ . I define  $p^*$  as the threshold level of market integration above which a population will gradually become pro-social and below which a population will gradual become self-regarding.  $p^*$  is a ratio of market integration whose statistical measurement will be defined in Chapter 4<sup>4</sup>. Market integration is decreasing in the numerator of  $p^*$  and increasing in the denominator<sup>5</sup>.

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<sup>3</sup>Remember that traditional game theory is ill equipped to explain why any one equilibrium is chosen when multiple equilibria exist and all are equally likely. Utilizing basins of attraction in evolutionary game theory provides a unique advantage to selecting among possible equilibria.

<sup>4</sup>For those who can't wait to find out how  $p^*$  is measured, it is Market Isolation divided by Market Integration.

<sup>5</sup> $p^*$  is normalized by a constant  $\epsilon$ , where  $\epsilon = .01$  so that  $p^*$  is always expressed as a fraction

The equilibrium of the system lies where

$$\Delta p = p^*(1 - p^*) \frac{W_{ps} - W_{sr}}{\bar{w}} = 0 \quad (3.4)$$

Two equilibria are immediately obvious. When  $p^* = 1$  or  $p^* = 0$ , the entire expression is equal to zero and we are at an equilibrium. Hence, at the limit, when either type comprises the entire population, natural selection has nothing to cull, and the system is at an equilibrium. The only other way for the equilibrium to equal zero is for  $W_{ps}$  to equal  $W_{sr}$ . When both types have the same probability of surviving into the next generation, natural selection does not affect the distribution of types in the population. I check if the two meaningful<sup>6</sup> equilibria  $p^* = 0$  and  $p^* = 1$  are stable if perturbed slightly from their equilibrium values. To do this I compute the derivative of the recursion and evaluate it at the equilibrium.

I take the recursion given in equation 3 and find its derivative. The derivative of equation 3 is

$$\frac{dp'}{dp} = \frac{d}{dp} \left( \frac{pW_{ps}}{\bar{w}} \right) = \frac{W_{ps}W_{sr}}{w^2}.$$

Next I consider the first equilibrium,  $p^* = 0$ . I want to find the derivative when  $p = p^* = 0$ :

$$\left. \frac{dp'}{dp} \right|_{p=0} = \frac{W_{ps}W_{sr}}{W_{sr}^2} = \frac{W_{ps}}{W_{sr}}$$

---

<sup>6</sup>The other equilibrium here  $W_{ps}=W_{sr}$  is not meaningful because it shows that both types will exist in the next round with the same frequency as in the previous round. Hence, there is no selection or evolution.



If the resulting value is less and 1 and greater than -1, the system is stable and small perturbations away from an equilibrium will not alter the dynamics of the system in the next generation.  $p^* = 0$  is stable if and only if:  $-1 < \frac{W_{ps}}{W_{sr}} < 1$ . By the rules of probability, the derivative cannot be negative because  $W_{ps}$  and  $W_{sr}$  are simply probabilities that a particular individual of a given type will survive into the next period. Hence, the system is stable only if  $W_{ps} < W_{sr}$  because the quotient is less than 1. In this equilibrium, the fitness of the self-regarding types is greater than that of the pro-social types. This makes sense. If the fitness of pro-social types in the population was greater, they would have higher probabilities of surviving into multiple generations, gradually replacing the self-regarding types. Hence, it can be seen that the interior solution of  $p^*$  is the boundary condition that divides the unit interval into two basins of attraction. If we evaluate the equilibrium at  $p^* = 1$ , then a symmetrical exercise to the one preformed above will show that when  $W_{ps} > W_{sr}$ , the system will gravitate towards an equilibrium composed of only pro-social types. Hence in this simple evolutionary model there are two equilibria. Basins of attraction are used to determine which equilibrium the system will tend towards. While multiple equilibria are possible, it remains to be specified how natural selection, represented in this model by the invisible hand of capitalism, influences  $p^*$  to shift away from the interior boundary solution and towards  $p^* = 1$  or  $p^* = 0$ .

### *Social Evolution in the Kibbutzim and Moshavim*

Now imagine that the two types of individuals described in the previous section engage in a game to produce either a jointly produced good or a private good. Individuals can choose to contribute their individual resources towards the production of a joint good, or they can choose to use their personal resources to produce a private good which is consumed only by that individual. Individuals in

this game follow their predetermined strategies. Pro-social types choose to contribute to the production of a joint good during the initial period of play. Self-regarding individuals choose to produce private goods. The production of a joint good requires the cooperation of a minimum of two individuals. Assume individuals are matched in pairwise interaction, so that cooperation between two individuals produces a joint good. If a self-regarding individual encounters a pro-social individual, no joint good will be produced, as the self-regarding individual will produce only a private good for herself. Thus this game has the structure of an iterated prisoner's dilemma, with individuals choosing not to cooperate or defect, but choosing to produce a private or joint good. Each individual who participates in providing a joint good receives the benefit of the good  $b$  and pays a private cost  $c$ . Individuals producing private goods receive an immediate benefit,  $b$ . In order to keep the model simple, I assume that self-regarding individuals derive the same utility from the private good as pro-social individuals do from providing the joint good. Further, assume that there is some probability  $\delta$  that the same pair of individuals plays again in the next round. Lastly, pro-social individuals are not only cooperators, but also punish individuals who behave selfishly. If a self-regarding individual chooses not to cooperate with a pro-social individual to provide a joint good, the pro-social individual will punish the self-regarding individual by withdrawing from the game and ending the interaction. This ends the game for both players. Punishment in this model is akin to social ostracism. This method of punishment's effectiveness in sustaining cooperation to produce joint goods and its ineffectiveness in producing private goods will be discussed in chapter 5.

Recall that pro-social individuals always cooperate on the first round. Even though defection can generate a higher payoff in the first period, pro-social types

Table 3.1: Payoffs to Production Game

	Provide Joint Good	Provide Private Good
Provide Joint Good	b-c, b-c	b-c, b
Provide Private Good	b, b-c	b, b

begin the game by playing nicely. Empirical evidence substantiates that this is a plausible assumption (Henrich et al. 2005; Carpenter 2003; Gintis et al. 2005; Bowles and Gintis 2011; Boyd and Richerson 2005). The next section will show how the resulting interaction between types of individuals results in the evolution of two stable patterns of social behavior, or two evolutionary stable strategies (ESSs). An ESS is a strategy which, if played by a sufficiently large proportion of a population of players in a given environment, cannot be destabilized by an alternative strategy that is sufficiently rare in that population (Maynard Smith and Price 1973). An ESS is a refinement to the concept of Nash Equilibrium for evolutionary models. Hence every ESS is also a Nash Equilibrium, but not the other way around. As in the case of the replicator dynamic, it will be shown that there is a unique and unstable interior equilibrium which defines the basins of attraction around two different ESSs. The ESSs of this particular game, it will be shown, entail homogenous populations where all individuals are either pro-social or self-regarding.

### *Evolutionary Stable Strategies*

The first task is to compute the expected payoffs for pro-social individuals, given they are playing with another pro-social individual. The payoff to a pro-social individual interacting with another on round one is

$$V(ps|ps) = b - c$$

and should be read as “the payoff to a pro-social individual, given she is playing against another pro-social individual is equal to the benefit of the joint good, minus its cost of production”. In any round that follows, the payoffs will remain the same, since neither individual will voluntarily defect. There is a chance  $\delta$  that another interaction between these individuals occurs. Thus, the expected payoff to each pro-social individual in round two is  $b - c$  multiplied by the chance that the interaction continues to round two,  $\delta^2$  and the payoff in round three is  $b - c$  multiplied by the chance the iteration continues for three periods  $\delta^3$  and so on. The expected long run payoff to this situation is thus

$$V(ps|ps) = \frac{b - c}{1 - \delta}.$$

Since no pro-social type ever defects when matched with another pro-social type, cooperation continues indefinitely and each individual receives the payoff  $b - c$  for  $\delta^{n-1}$  periods.

It is similarly easy to calculate the expected payoff for a population of interacting self-regarding types. The payoff to a self-regarding type interacting with another self-regarding type in the first round is  $b$ . Since both individuals defect on into infinity, the long run payoff to self-regarding types is thus

$$V(sr|sr) = \frac{b}{1 - \delta}.$$

These patterns of behavior are stable if there is no mixing among types in the population. This is an unrealistic assumption. Recall the metaphor given earlier

about Degania, the first kibbutz, being the nucleus of a cell of Zionist settlement. Degania contained an unstable mixture of pro-social and self-regarding individuals within its population. There was a continual mixing of types in Degania's population, and this unstable mixing ultimately created a splinter settlement, a new institution - the moshav Nahalal. Understanding the mixing of types in the population of Degania, represented abstractly in this model, is crucial to understanding the evolution of social behavior in the kibbutzim and moshavim. Interaction among types in this model is nonrandom due to the effect of the replicator dynamic. As a type becomes favored due to the evolutionary selective pressure of market integration or market isolation, it increases in frequency in the population, making replication among members of that type more common. While an individual of one type will meet another individual similar to it with an increasing probability over time, some interaction among unlike types will occur if there is variation in the population. We can write the payoff to a pro-social individual playing against a self-regarding individual in the following way:

$$V(ps|sr) = -c$$

The pro-social individual decides to provide individual resources to the production of a joint good in the first period, while the self-regarding type decides to produce a private good. Hence, in the first round, the pro-social player pays a private cost  $c$ , and then punishes the pro-social individual by refusing to play with that individual in any subsequent periods. Hence, each additional round after the first yields a payoff of zero for the pro-social individual since it removes itself from the interaction. Similarly, the payoff for a self-regarding individual playing with a pro-social individual is simply

$$V(sr|ps) = b.$$

The self-regarding individual receives the first round benefit of the private good, but receives no payoff in any round thereafter due to punishment by the pro-social player. Since these are one time payoffs, I can compare them to each other to determine under what conditions each is evolutionarily stable. A population in which pro-social behavior is common can resist invasion by self-regarding individuals if

$$V(ps|ps) > V(sr|ps)$$

Substituting in the payoffs I calculated earlier yields the following condition:

$$\frac{b - c}{1 - \delta} > b. \tag{3.5}$$

This payoff can be rewritten as:

$$\delta b > c \tag{3.6}$$

When pro-social individuals are common in a population, they interact more frequently than with self-regarding types and so get  $b - c$  for as long as their interactions with other pro-social types persist. A population of pro-social types can resist invasion by rare self-regarding types when the long run benefits to cooperation among those types are greater than producing a private good in round one. In a population composed mostly of pro-social types, rare self-regarding individuals receive a payoff equal to  $b$  on the first turn by defecting and then nothing on subsequent turns due to the punishment strategy of pro-social individuals. In order for pro-social types to resist invasion by these self-regarding defectors, the payoffs to

long run cooperation must be greater than the one period defection payoff. Pro-social behavior can only evolve when pro-social types are selected for by the mechanism of natural selection. In the kibbutzim, the selective pressure of the market was absent, allowing cooperative relationships to persist over long periods of time. Hence, market integration exerted little force on social relationships in the kibbutzim, allowing cooperation to persist and reciprocal altruism to evolve.

For the kibbutzim, this ESS is intuitive. The opportunity for producing private goods for individual consumption was nonexistent in the kibbutzim due to the abolition of all private property. Further, as Chapter 5 will demonstrate, those individuals who did engage in the production and consumption of goods privately in the kibbutzim were socially ostracized and their living situations were often made unbearable (Near 1992a). Other kibbutzniks simply stopped interacting with them. Once an individual developed a reputation as a shirker in a kibbutz, that person was socially ostracized and the community refused to interact with that person. Often times, this ostracism forced these shirkers to leave the kibbutz permanently (Near 1992a, Criden and Gelb 1974). Hence, in the kibbutzim, the benefits to long term cooperation in producing any manner of good from agricultural produce to security, were much higher than engaging in self-interested behavior.

While large pro-social populations can resist invasion by self-regarding types if the benefits to long run cooperation are sufficiently high, pro-social individuals find it difficult to invade a large population of self-regarding types. When self-regarding individuals are common in the population, they can resist invasion by rare pro-social types if

$$V(sr|sr) > V(ps|sr).$$

Since self-regarding individuals produce only private goods when paired with other self-regarding types, they receive no value for producing a joint good, and pro-social individuals pay a cost  $c$  when interacting with self-regarding types, the condition for self-regarding populations to resist invasion by pro-social types is:

$$0 > -c. \tag{3.7}$$

By definition, this inequality is true and thus rare pro-social types cannot invade a population composed of a higher proportion of self-regarding types. Since providing any amount of resources towards the production of a joint good is costly, even if only marginally so, self-regarding types will always receive higher long run average payoffs when they comprise a majority of the population. Thus, being self-regarding is also an ESS against types which play a pro-social strategy. Chapter 5 will provide ample evidence that such behavior became increasingly common over time in the moshavim. The selective pressure of market integration altered the distribution of types to favor self-regarding individuals in the moshavim.

### Bringing it Back Together

I have shown how natural selection, represented in this chapter by market integration, can effect the evolution of social behavior within a particular institution. The model has purposively abstracted from the institutional environment of the kibbutz and moshav, instead reducing institutional environment to market integration. While this is an abstraction, it is a useful one because it tells a compelling story that is in line with historical accounts of social behavior within these two types of settlements. Kibbutzim were isolated from markets, and this isolation from market pressure allowed for the evolution of pro-social behavior. The equilibria derived above tell a compelling story that is in line with the historical



account of the formation of the kibbutzim and moshavim. Recall that the founders of Nahalal, the first moshav, were former kibbutzniks who left Degania to live in a settlement which would give greater freedom to the individual. The unstable nucleus of settlement that was Degania thus spit into two different institutions once the Nahalal settlers left. Zionist settlement permanently diverged at this moment with the kibbutzim now representing an entirely different institution of settlement from the moshavim. Each settlement would play by different rules, with self-regarding behavior the norm in the moshavim, and pro-social behavior the norm in the kibbutzim. This pattern of settlement would last through 1948 and Israel's war of independence. This chapter has provided an analytical model which demonstrates how a natural selection process facilitated the evolution of two different patterns of social behavior. The following chapters will provide empirical tests to demonstrate how these different behavioral patterns, influenced by market integration, developed comparative institutional advantages (Hall and Soskice 2001) within the kibbutzim and moshavim for the production of security and economic growth respectively.

## Chapter 4

### SOCIAL BEHAVIOR, MARKET INTEGRATION, AND PUBLIC GOODS PROVISION: JEWISH AGRICULTURAL SETTLEMENT AND NON-WEBERIAN GOVERNANCE

“The idea of the kibbutz was not just to active coexistence between the nationalist aspirations of Zionism and the universal ideas of socialism, but a fusion of the two. The pioneers wanted to create this fusion by practicing what they preached...You could not do that as long as each individual lived for himself. The only way to do it was through the group - (Criden and Gelb 1974)

...A moshavnik came to the village and asked if there was mutual aid between members. The answer was: ‘Of course, two farmers will always combine to push down a third.’ – a moshav joke reported in Baldwin (1972)

The previous chapter constructed the mathematic model describing how variation in market integration could bifurcate a mixed population into two homogenous groups of self-regarding or pro-social types of individuals. The institutional structure of the kibbutzim and moshavim served as basins of attraction towards which pro-social or self-regarding types would migrate. This chapter and the one following it provide empirical evidence demonstrating that variation in the levels of market integration between the kibbutzim and moshavim served to endow these two types of settlements with comparative institutional advantages in the production of different public goods.

This chapter will present the results of statistical regressions utilizing an original dataset developed from Israeli archival documents, while the following chapter will qualitatively examine how different market forces served to instill self-regarding and pro-social attitudes among moshav and kibbutz members respectively.

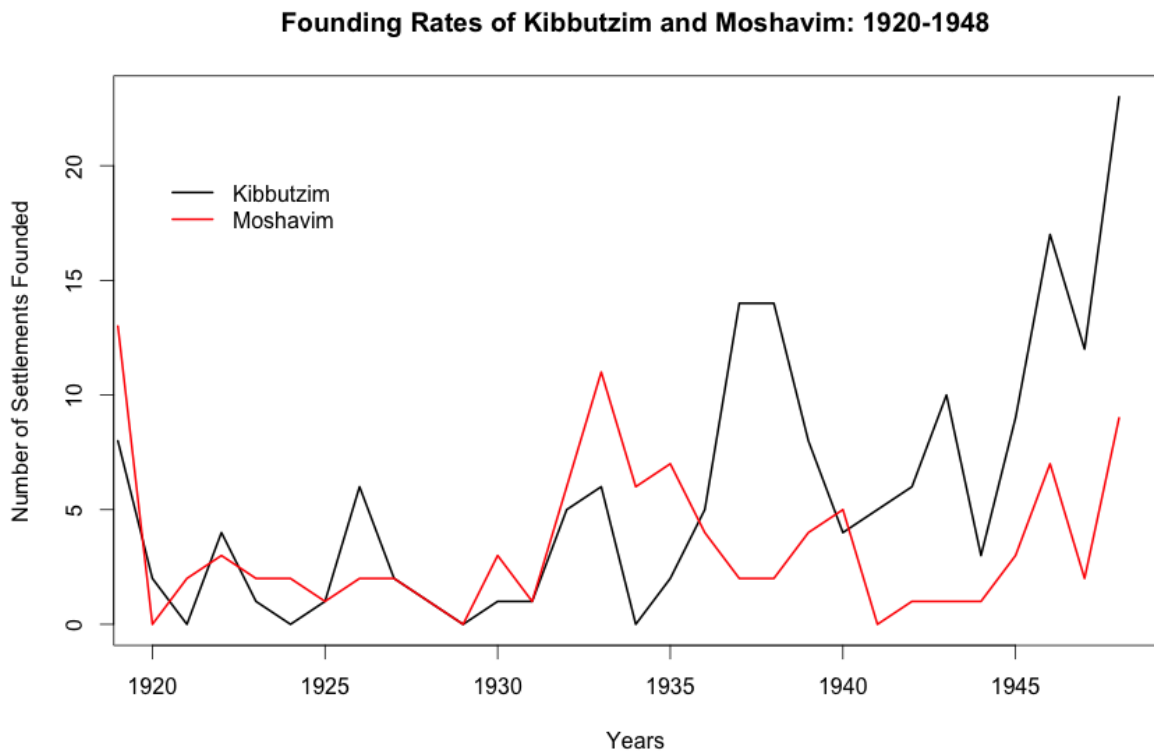
The founding rates of the kibbutzim and moshavim from 1920-1948 display a very distinct pattern. During years where there was relative peace between the Jewish community and the Palestinian Arabs, moshavim were founded at a greater rate than kibbutzim. 53 moshavim were founded during years of peace, as opposed to 39 kibbutzim from 1920 to 1936, a period of relatively peaceful relations between the Jews and Arabs. When ethnic relations became more violent, however, kibbutzim were constructed more frequently than moshavim. From 1936 to 1948, years of sustained conflict, 130 kibbutzim were founded as opposed to only 48 moshavim. Table 4.1 demonstrates the percentages of each type of settlement constructed during years of relative peace or conflict, while Figure 4.1 graphs the relative founding rates of kibbutzim and moshavim across time.

Table 4.1: Variation in the Distribution of Settlements According to Conflict Periods

Type	Peace Years	Percent Total	Conflict Years	Percent Total	Total
Kibbutzim	39	23%	130	77%	100%
Moshavim	53	52%	48	48%	100%
Total	92	34%	178	66%	100%

What explains the sudden change in the pattern of settlement construction? The differential founding rates of these two types of settlements, and especially the massive increase in the construction of kibbutzim during years of conflict is explained by a strategy of governance implemented by the proto-state institutions of

Figure 4.1: Settlement Founding Rates Across Time



the Jewish community in Palestine, directed and implemented by the Jewish National Fund (JNF) and Jewish Agency (JA). This strategy of governance relied on using the kibbutzim and moshavim to provide various public goods. Because the national-level institutions of the Jewish state were absent during this period due to the British mandate over Palestine, the Jewish community relied on sub-national political units to provide crucial public goods that are normally the purview of nation-states: military security and economic growth.

To govern effectively, states must provide for the needs of their citizens. At minim this means satisfying the material and economic needs of citizens and providing for their physical security (Tilly 1975; Olson 1993; Ertman 1997; Mampilly 2011). Yet because its national political institutions were underdeveloped

and did not function separately from the British mandatory institutions, the Jewish community could not rely on its own state to provide those critical public goods. Although the national-level political institutions did not function as such institutions function in independent, territorially sovereign states, subnational institutions, including the kibbutzim and moshavim, facilitated the provision of military security and economic growth respectively. This chapter will demonstrate through the statistical analysis of an original dataset collected from Israeli archival sources, how the kibbutzim and moshavim provided various public goods.

#### Agricultural Settlement as Governance Strategy

To demonstrate the validity of the hypotheses proposed in the last chapter, I analyze the spatial distribution of settlements in this section. The moshavim, because they were founded to grow and develop the Jewish economy, were constructed in agriculturally fertile areas, especially the coastal plain and Jezreel Valley. The kibbutzim, being founded to provide security, were constructed more closely to the borders of Palestine and in less economically profitable areas.

#### *Moshavim and Economic Development*

As shown in Table 4.1 and Figure 4.1, the proportion of moshavim constructed from 1920 to the beginning of the Arab Revolt in 1936 outpaced the construction of kibbutzim during the same time period. Fourteen more moshavim were constructed than kibbutzim during this period. The years 1920-1936 were also peaceful periods where ethnic tensions between the Jews and Arabs were at their lowest, with only 1921 and 1929 being years where noticeable rioting took place, but even then, these riots were uncoordinated and localized to specific locations such as Jerusalem. It makes sense that the majority of moshavim were constructed during this time period. If moshavim were constructed to grow the Jewish economy, they would have

been constructed more during peace time. Conflict is destructive - it destroys resources, markets, capital, and labor. Hence, as the threat of conflict increased, the founding rates of moshavim fell dramatically, as shown in Figure 4.1.

Peaceful relations with the Palestinian Arabs allowed Jewish markets to grow and develop without fear of disruption. A critical factor in developing Jewish markets was the consumable agricultural goods produced by the moshavim. The Jewish economy during this period was mainly agricultural (Near 1992). The moshavim served as dynamic engines of agricultural productivity during this period, contributing a great deal to the growth of the Jewish economy. The moshavim more than doubled the number of hectares dedicated to field crops from 1929 to 1936, for example, going from 3,700 hectares under cultivation in 1929 to 7,800 by the end of 1935 (Near 1992; 338). During this period, the Jewish economy expanded its production 20.5 percent from 1932 to 1933 with agricultural productivity accounting for thirteen percent of this increase (ibid). The population of the moshavim also exploded during this period, increasing more than ten times, going from a mere 534 settlers in 1923 to 5,400 in 1935 (ibid; 189). The moshav population also increased faster relative to the population of individuals living in the kibbutzim. From 1925 to 1928, the kibbutz population rose from 1,390 individuals to 1,782, a 1.28-fold increase. The population of the moshavim during the same time period increased 1.4 times, growing from only 856 settlers to an estimated 1,200 in 1928 (ibid; 138-39).

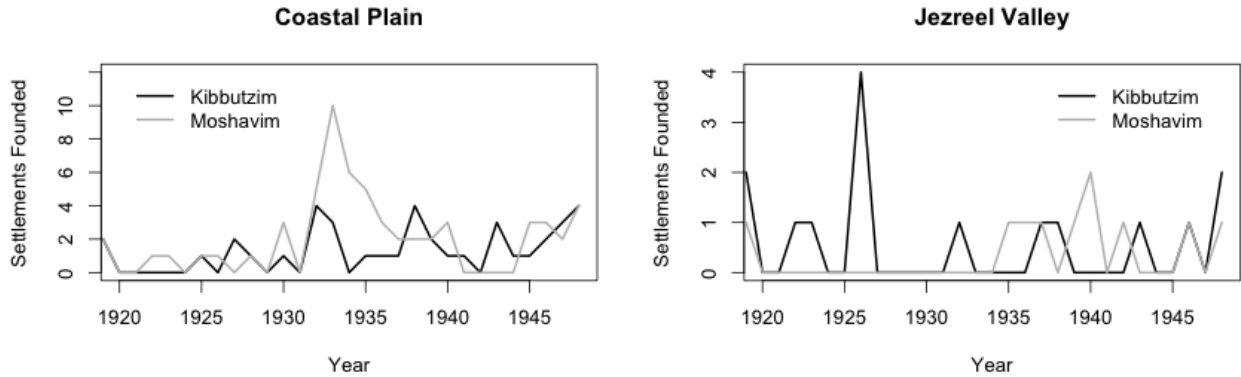
The moshav was the preferred settlement choice from 1920 to 1935. The JNF and JA emphasized the need for economic growth when settling agricultural institutions during this time period (Near 1992; 135-136). The settlement of kibbutzim almost came to a complete halt from 1926 to 1930, and for the beginning of the 1930s, settlement preference was clearly given to moshavim over kibbutzim.

The reason for the preference for moshavim over kibbutzim lies in the economic boom the Jewish community enjoyed during the final years of the 1920s up to the middle of the 1930s due to the rising price of Palestine's main agricultural export: citrus. The economic boom had brought a state of full employment to the Jewish economy (Near 1992), and citrus plantations proliferated across Jewish Palestine. The moshavim contributed to the growth of the Jewish economy during this period by expanding their plantings of citrus ten percent. The kibbutzim, by contrast, opted for a more self-sufficient cropping pattern. They expanded their citrus production by only three percent, and instead choose to plant a more diversified array of crops, most of which had little export value (Near 1992; 180-181).

Citrus plantations proliferated mainly on Palestine's agriculturally fertile coastal plain, where the majority of moshavim were established. From 1920 to 1935, the settlement of moshavim outpaced that of the kibbutzim on the coastal plain by a 3:2 ratio. While the moshavim of the coastal plain served as economic powerhouses contributing to the growth of the Jewish economy, the kibbutzim that were settled in this area did not. While only about one-third of the total kibbutzim founded during this time existed in the coastal plain, there were comparatively more kibbutzim located in the Jezreel Valley, another agricultural center. Still the kibbutzim located in the Jezreel Valley deliberately did not expand their citrus plantings (Near 1992; 180). Figure 4.2 shows the trend lines for the settlement of kibbutzim and moshavim across both the coastal plain and the Jezreel Valley over time.

As Figure 4.2 shows, the founding of moshavim outpaces that of kibbutzim in these two agriculturally fertile areas, with the exception of a spike in kibbutz settlement in the Jezreel Valley from 1925 to 1926. This is in line with theoretical

Figure 4.2: Rates of Kibbutz and Moshav Founding Across the Coastal Plain and Jezreel Valley 1920-1948



expectations. If the moshavim were constructed to grow and develop the Jewish economy, it makes sense that a greater number of them were constructed in the two most agriculturally fertile regions of Palestine. Further, the onset of the Arab Revolt in 1936 does nothing to diminish the trend of moshav settlement in these two areas. The level of moshav settlement remains greater than or equal to the settlement of kibbutzim in these areas, even up to 1948, when security concerns dominated the decision making as regarded the settlement of new kibbutzim and moshavim.



### *Kibbutzim and Military Security*

The onset of the Arab Revolt completely altered the settlement strategy pursued by the JNF and JA. While the revolt caused little direct damage to the Jewish community in terms of casualties, the political ramifications of the revolt were immense. The British, who had originally been receptive to the goals of Zionism, did a complete about-face. In 1939 at the end of the revolt, the British Mandatory regime essentially capitulated to the Palestinian Arabs' demands by publishing the White Paper of 1939. The White Paper heavily restricted Jewish immigration, which the Arabs claimed as pushing the Arab peasant farmers, the *fellaheen* off their land. Many of the *fellaheen* formed the backbone of the militias that comprised the Arab forces during the revolt. The White Paper further recommended the creation of an independent state comprising the territory of Palestine within ten years. The relative proportions of Jews and Arabs within this state would be determined by the relative sizes of each community in 1939 - thirty-three percent Jewish and sixty-six percent Arab (Near 1992b). After the revolt, the Jewish community harbored no illusions that if they were to become a permanent minority in a majority-Palestinian Arab state, they would be placed in a very vulnerable position.

Further, the British regime instigated a policy of repression against the Jewish community. With the publication of the White Paper, the British were no longer interested in providing military security to Jewish settlements. Beginning in 1939, British authorities began to confiscate Jewish arms and restrict Jewish gun ownership. From 1939 to 1943 British authorities showed their determination to repress the Jewish community by conducting several searches for hidden arms across several kibbutzim including Giv'at Haim, Dafna, Ein Harod, Giv'at Brenner, Hulda,

Gan Shumel, Na'an, Ein Shemer, and Ramat Hakovesh. These searches were conducted with great brutality, causing economic harm to the settlements through the uprooting of crops, and in some cases causing the death of a few settlers (Near 1992b; 23). In many of these raids kibbutz members were imprisoned for long periods of time if weapons were discovered within the settlement.

The Jewish community's primary concern in the wake of the publication of the White Paper shifted from developing the Jewish economy to ensuring the military security of the Jewish community (Weintraub et al.1969; Near 1992b). A new security strategy was needed now that the British were trying to curry favor with the Arabs. The strategy that was implemented involved the construction of kibbutzim in strategically important areas of Palestine. As Figure 4.1 shows, beginning in 1936 the settlement of kibbutzim settled vastly outpaced the construction of moshavim. From 1936 to 1948, 2.75 kibbutzim were constructed for every moshav: 122 kibbutzim were constructed as opposed to only 48 moshavim. The massive increase in the construction of kibbutzim is directly attributable to the change in security conditions (Weintraub et al. 1969; Hasson and Gosenfeld 1980; Near 1992b; Morris 2008). During periods of peace, security considerations had been put on hold. Now that the Jewish community was facing a hostile Arab population and a British regime that no longer sought to assist with the fulfillment of Zionist goals, security considerations could no longer be ignored. Further, with the deterioration Jewish/Arab relations, the financial considerations that had served as the basis for land acquisition and investment policy by the JNF were discarded and military policy became the predominant factor when deciding where to build new settlements as well as what type of settlements to build (Near 1992b; Kellerman 1993). The JNF and JA inaugurated a drive to establish settlements on every parcel

of land in all parts of the country, even if this meant founding settlements in isolated, and economically unprofitable, areas (Weintraub et al. 1969). David Ben Gurion spoke of the need to increase Jewish defensive positions by constructing settlements, “in positions, key positions, for expansion of borders, for strengthening our security, for protection of traffic routes...not as a declaration or a formula, but in fact creation - this has to be the goal of our policy” (Kellerman 1993; 58).

The JNF and JA followed up on Ben Gurion’s policy by constructing what were known as “Tower and Stockade” settlements. Tower and Stockade settlements were kibbutzim and moshavim built from 1936 to 1939 in order to provide security in rural border areas of Palestine (Near 1992b; Hasson and Gosenfeld 1980). Tower and Stockade settlements were meant to be military fortresses where the settlers inside would be ready to defend themselves within a few hours after construction of the settlement began. Each Tower and Stockade settlement was constructed with a double wooden fence to protect against assaults. The inside of this fence was filled with gravel to add strength to the fortification. The fence surrounded a square courtyard. In each courtyard was a guard tower and surrounding the tower were the residential buildings. From 1936-1939, forty-eight Tower and Stockade settlements were constructed, thirty-six of which were kibbutzim. While the Tower and Stockade settlements provided local security around their fixed locations, these settlements also provided military security to the entire Jewish community. While both moshavim and kibbutzim were constructed as Tower and Stockade settlements, only the Tower and Stockade kibbutzim provided security.

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<sup>1</sup>Only one moshav experience an attack in 1948.

Table 4.2: Average Attack Severity Among Tower and Stockade Settlements 1936-1939 and 1948<sup>1</sup>

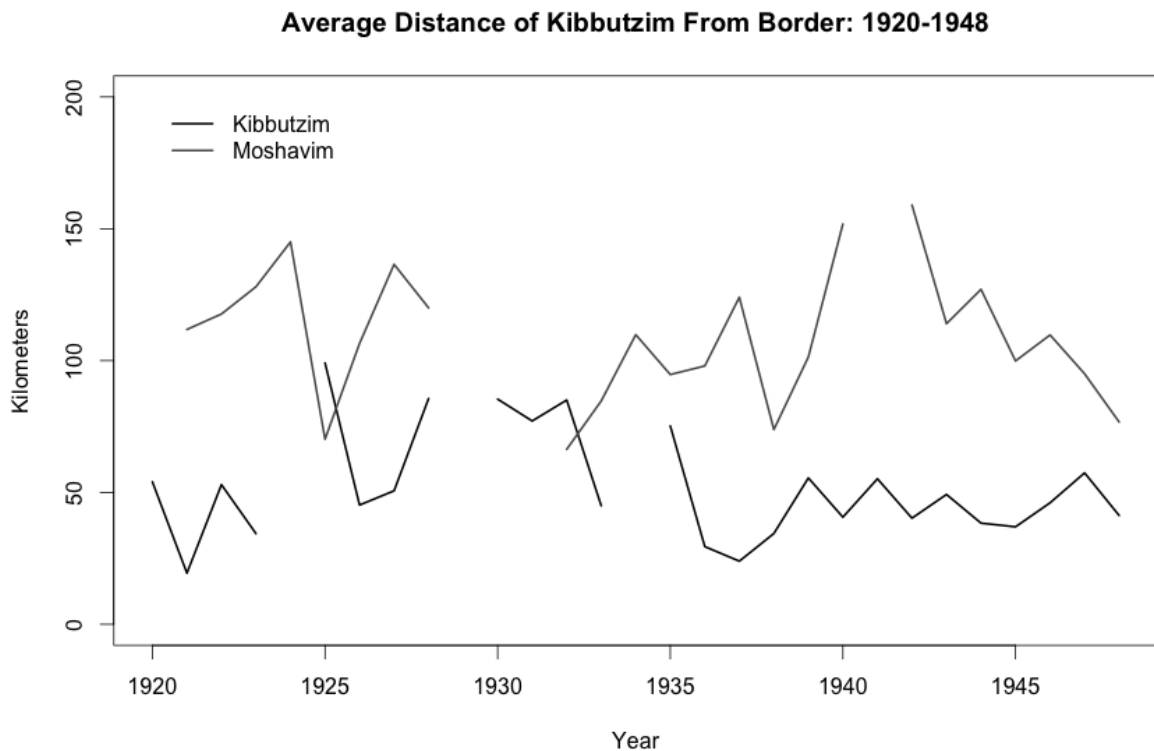
Settlement Type	Average Attack Severity 1936-1939	Average Attack Severity 1948
Kibbutzim	1.23	1.85
Moshavim	0	0.17

Data coded from archival material published by the Jewish National Fund (1949) demonstrate that the Tower and Stockade kibbutzim suffered attacks from Arab forces and provided security while the Tower and Stockade moshavim were not attacked and provided no security. Data as to the severity of attacks against a given settlement were coded on a six point scale with higher numbers representing more severe attacks. The data are reported in Table 4.2. As can clearly be seen from the table, the Tower and Stockade kibbutzim suffered the brunt of Arab attacks. No moshav was attacked during the Arab Revolt, and security provision among Tower and Stockade moshavim was extremely low even during the worst of the fighting in 1948. Arab attacks against Tower and Stockade kibbutzim rose from the 1930s to 1948, and consequently, security production by those kibbutzim rose. If a given kibbutz was attacked during the Arab Revolt, it suffered attacks 2.71 times *less* severe in 1948. If a kibbutz was not attacked during the Revolt, its chances of being attacked in 1948 *rose* 2.26 times. Tower and Stockade kibbutzim actually deterred Arab attacks given that they had previously been attacked.

Another way to determine if the kibbutzim were founded to provide security to the Jewish community, evidence should show that they were constructed in more hostile areas. The border regions were the most hostile, with Arabs vastly outnumbering Jews. The majority of Jews lived in the cities like Jerusalem, Jaffa,

and its emerging suburb Tel Aviv. The borderlands were the home of the Bedouin and until 1939 Jews had not settled in significant numbers in the border areas (Near 1992b). If kibbutzim were constructed to provide security, they should be located more closely to the borders of Palestine while the moshavim, designed to provide economic growth, should be located more inland and far from the borders. This result is shown in Figure 4.3.

Figure 4.3: Distance of Kibbutzim and Moshavim from Border 1920-1948<sup>2</sup>



As Figure 4.3 shows, moshavim were, on average, constructed at twice the distance from the borders of Palestine as were kibbutzim. In general, kibbutzim were constructed no more than 50-70 kilometers from Palestine’s borders, while moshavim were generally constructed anywhere from 100 to 150 kilometers from the

<sup>2</sup>The graph is disjoint where no kibbutzim or moshavim were founded that year.

border. Figure 4.3 does not by itself prove that kibbutzim were providing security while the moshavim were not, but the relationship between distance to the border and the type of settlement is quite pronounced in Figure 4.3. The trend lines only overlap in two years, and the distance between the two lines becomes more pronounced after the onset of the Arab Revolt in 1936. Taken together, the fact that the kibbutzim were nearly always constructed closer to Palestine's borders than the moshavim, and that this trend became more pronounced after 1936 implies a strategic decision by the JNF and JA to construct kibbutzim in vital border regions in order to provide security in hostile territory.

The construction of kibbutzim in border areas was not simply due to random chance. A report presented to the chiefs of staff of the Haganah, the Jewish underground military force, at the beginning of 1943 included a comprehensive strategic settlement plan for the coming years. The report, drawn up under the supervision of the Jewish Agency, suggested that the kibbutz was the best form of settlement in unsettled and hostile areas, and the moshavim should be constructed further inland, particularly in areas already containing existing settlements. The JA favored the more compact social structure of the kibbutz when considering when to construct settlements in hostile areas as opposed to the scattered and less cohesive moshav pattern because they understood the social cohesion between kibbutz members gave that form of settlement greater military solidarity and increased the discipline of its members, making for a more effective military fighting force (Near 1992b).

If the main function of the kibbutzim from 1936 to 1948 was to provide military security and not to encourage economic growth, it should be the case that the economic profitability of the kibbutzim during this period fell. This is exactly

what happened. At the end of 1945, the balance sheets of all kibbutzim tallied a loss of 60,000 Palestinian pounds as compared to an overall profit of only 34,000 pounds. The kibbutzim settled from 1930 onward were especially indebted since they were only beginning to develop their agricultural capacities (Near 1992b; 63). The indebtedness of the kibbutzim to private banks, the Jewish National Fund, and the Jewish Agency increased 250 percent during this time period (ibid). Hence, the main contribution the kibbutzim made to Jewish agricultural pioneering and Jewish society during this period was not the development of economic markets, but rather the military protection of the Jewish community.

#### Social Evolution and non-Weberian Governance

The previous section demonstrated the moshavim played critical roles growing and developing the Jewish economy while the kibbutzim were instrumental in providing military security. But how did these agricultural settlements come to be endowed with these two different institutional advantages? This section answers this question by analyzing an original dataset constructed from Israeli archival sources. Two regression analyses will be presented in support of Hypotheses 1 and 2. It will be shown that market integration positively influenced a settlement's ability to contribute to the growth and development of the Jewish economy, while market isolation positively influenced a settlement's comparative advantage in providing military security.

To analyze how market integration influenced the evolution of self-regarding behavior in the moshavim while market isolation led to the evolution of pro-social behavior in the kibbutzim, I analyze micro-level patterns of social behavior within the kibbutzim and moshavim. In the absence of individual level data, the effects of market integration must be deduced from behavioral evidence (Hechter 1978). One

way to deduce the effects of market integration on social behavior is to link outcomes commonly theorized to be possible only under conditions of cooperation to measures of market isolation while correlating outcomes that are the result of market processes on measures of market integration. If market isolation positively predicts the production of cooperatively produced joint goods, like military security, then it is plausible that social behavior in settlements isolated from market forces was more cooperative. The reverse is the case for settlements more tightly integrated with capitalist markets. Social behavior should be more self-regarding in such settlements. Chapter 5 will further demonstrate the validity of this hypothesis with regard to more qualitative methods and evidence.

### *The Data*

To determine how market integration influenced the ability of kibbutzim and moshavim to supply the Jewish community with need public goods, several variables were constructed from archival data (Bachi et al. 1955). The data were collected at the level of the individual settlement and record extensive social and economic data from 270 settlements - 99 moshavim and 171 kibbutzim. The data have been compiled into several measures of market integration and isolation. Specifically, six measures were created to determine how variation in market integration by settlement affected the production of military security or economic development by settlements.

### *Measures of Market Integration and Isolation*

To construct measures of market isolation, I develop three variables. First, I measure the proportion of settlers per capita employed within the public sector of a settlement. The public sector is defined as the economic branches of the kibbutzim and moshavim which provided public and personal services to other settlement



members<sup>3</sup>. A higher proportion of individuals employed in the public sector of a settlement implied a lesser reliance on outside markets for obtaining needed goods and services. Second, I measure the proportion of settlers working within their own settlement. A higher proportion of individuals working within their settlement implies a lesser reliance on outside markets for employment, and hence more isolation from outside markets. Third, I develop a variable which measures the strength of social ties within a settlement. To calculate this variable, I measure the proportion of children aged 0-15 within a given settlement. A larger number of children implies a greater sense of social cohesion, especially in the kibbutzim where childrearing was a communal endeavor (Near 1992; Baldwin 1972; Barkin and Bennett 1972). A greater number of children also implies higher costs of exiting a settlement as outmigration would disrupt a child's education and entail severing social relationships.

To measure market integration I also construct three variables. First, I measure the proportion of individuals within a settlement who owned private property. More settlers owning private property indicates a higher level of market integration as individuals who owned private property most likely exploited it to receive economic rents and returns to capital. Second, I measure the outside earning potential of settlers by measuring the proportion of settlers who were literate. Illiterate individuals would have been severely restricted in gaining employment in outside labor markets. Near (1992) reports that there was a good deal of anti-intellectual sentiment within the kibbutzim and this was cultivated in order to encourage kibbutz members to focus solely on agricultural labor. Berman (2009) has demonstrated that illiteracy decreases an individual's future earnings in labor

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<sup>3</sup>Economic branches 7 and 8 in the census data.

markets, but increase an individual's propensity to cooperate with fellow in-group members. Third, I create a variable measuring the proportion of settlers who were hired by other settlers within the same settlement. If settlers were being hired and paid a wage, it indicates other settlers were earning their living from outside the settlement (hence their need to hire farm laborers) and it also demonstrates that a proportion of settlers were incentivized directly by market mechanisms (Weintraub et al. 1969).

Table 3 displays descriptive statistics demonstrating variation in levels of market integration among kibbutzim and moshavim. Market integration differs substantially between the kibbutzim and moshavim in three key respects. First, because private property was banned in the kibbutzim, the mean value for the variable measuring the proportion of individuals in kibbutzim is zero. The average proportion of individuals owning private property in the moshavim is considerably higher at 0.16. Second, since the kibbutzim forbade the hiring of laborers, the mean value for the proportion of individuals hired in the kibbutzim is also zero. Again the proportion of individuals hired in the moshavim is higher at 0.08. Third, the size of the kibbutz's public sector is twice as large as the public sector in the moshavim. On average, fifteen percent of a kibbutz's population was employed in the public sector, while only six percent of a given moshav's population was similarly employed. Finally, a greater percentage of kibbutzniks were employed by their own settlement than were moshavniks. Sixty-seven percent of a kibbutz's population was employed by the kibbutz. The corresponding figure for the moshavim is forty-four percent.

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<sup>4</sup>All variables expressed as proportions of populations

Table 4.3: Descriptive Statistics: Market Integration by Settlement Type<sup>4</sup>

Variable	Mean	SD	Min	1st Quartile	3rd Quartile	Max
<b>Kibbutzim</b>						
Private Property	0.00	0.00	0.00	0.00	0.00	0.02
Proportion Hired	0.00	0.00	0.00	0.00	0.00	1.00
Outside Options	0.82	0.12	0.00	0.76	0.89	1.00
Working in Settlement	0.67	0.18	0.10	0.53	0.83	1.00
Social Ties	0.41	0.13	0.00	0.33	0.50	0.96
Public Sector	0.15	0.10	0.00	0.07	0.23	0.43
<b>Moshavim</b>						
Private Property	0.16	0.11	0.00	0.10	0.23	0.58
Proportion Hired	0.08	0.08	0.01	0.00	0.14	0.30
Outside Options	0.80	0.12	0.41	0.74	0.87	1.00
Working in Settlement	0.44	0.19	0.00	0.30	0.51	1.00
Social Ties	0.40	0.12	0.00	0.32	0.47	0.72
Public Sector	0.06	0.07	0.00	0.02	0.08	0.32

#### *Dependent Variables*

To determine how market integration affected the provision of security I utilize a dichotomous dependent variable that indicates whether or not a settlement was constructed as a Tower and Stockade settlement<sup>5</sup>. To determine how market integration affected the ability of a settlement to grow the Jewish economy, I utilize the measure of settlers owning private property as a dependent variable.

#### *Alternative Explanations*

Multiple explanations have been advanced to explain the provision of public goods and the propensity for groups to engage in collective action. This literature and the corresponding explanations are too vast to survey here, but several prominent

<sup>5</sup>Although the data use here were measured in 1948 and Tower and Stockade settlements were generally constructed a decade earlier, they did not stop providing security in the 1930s. It is conceivable that these settlements were providing security even after their foundlings.

explanations can be considered with the data available. First, it is well understood that the provision of public goods becomes easier in smaller groups (Olson 1965). To account for this explanation, I control for the population size of a settlement. I also control for settlement size by measuring the area of a settlement. Smaller settlements forced more interaction among individuals and reduced anonymity. Second, I control for the male population of a settlement. While the socialist ideology of the Jewish community encouraged women to cast off traditional gender roles like childcare, complete gender equality was not achieved and women often worked more in the home while men engaged more in military and economic activity (Near 1992, Criden and Gelb 1976). Third, to control for the youthfulness of a settlement's population, I measure the mode age of a settlement. Several studies have documented that a "youth bulge" often is associated with higher levels of military action and conflict (Urdal 2004; Urdal 2006; Goldstone 2002).

Fourth, I consider the ability of a settlement to monitor the behavior of its members. The ability to monitor the behavior of members is crucial for groups to successfully engage in collective action (Olson 1965; Hechter 1988; Ostrom 1990; Lichbach 1998). I operationalize the ability of a settlement to monitor the behavior of its members by measuring the proportion of individuals within a settlement that did not speak Hebrew. Since Hebrew was the language of the Jewish community, and was a common language that united Russian, German, French, and Oriental Jews, higher proportions of non-Hebrew speaking individuals indicates a plurality of languages and an inability for settlement leaders to control the behavior of individual members. Fifth, I consider the rural location of a settlement. Settlements established in rural areas were more likely to have difficulties developing a robust agricultural economy as many rural areas of Palestine, like the Negev desert, and

the Galilee were ill suited to agricultural development. I measure the ruralness of a settlement by dividing its distance from the border by its distance from Jerusalem. Higher values of ruralness thus indicate a closer proximity to the border of Palestine than to Jerusalem. I also control for the level of security threat a settlement faced from 1936-1948 by utilizing the six-point scale of security threat discussed earlier. Sixth, I consider the ethnic fractionalization of a settlement as a factor influencing the provision of public goods and the ability of individuals to engage in collective action. Recent literature suggests that higher levels of ethnic diversity may undermine the provision of public goods (Alesina et al. 1999; Alesina 2003; Alesina and La Ferrara 2005; Habyarmania et al. 2007; Baldwin and Huber 2010).

Finally, I consider a settlement's ideology as an alternative explanation for the production of public goods. The Israeli historical literature emphasizes the socialist and Zionist ideology of the kibbutzim and moshavim in explaining the relative ability of the kibbutzim to provide military security and the moshavim to provide economic growth. (Near 1992; Near 1992b) considers the socialist ideology of kibbutz settlers to be of primary importance in explaining their ability to engage in pioneering tasks, especially the founding of kibbutzim in rural and hostile environments. Broadly, the socialist ideology of kibbutz members encouraged collective action by instilling a propensity for pro-social behavior. This pro-social behavior was maintained without the need for stringent monitoring and sanctioning systems and did not depend on market integration. Because kibbutz pioneers were socialists, collective action problems did not apply because their ideology had already instilled in them a propensity for cooperative behavior.

To measure the ideology of a settlement, I use a five-point scale that measures the political party a settlement belonged to. The data are collected from

the Jewish National Fund (1949). The vast majority of kibbutzim were affiliated with one of the five national kibbutz political parties<sup>6</sup>, but the moshavim were not affiliated with any such political parties and hence receive a zero ideology score. The five-point scale measures the parties from least to most socialistic, so that higher scores on the scale measure more ideologically committed kibbutzim. Moshavim receive a score of zero for ideology, as moshavim were not affiliated with national socialist parties.

#### *Differences in Kibbutzim and Moshavim by Geographic Location*

This section analyzes differences in market integration and isolation among kibbutzim and moshavim by geographic location. The geographic locations analyzed are the coastal plain, the Jezreel valley, the Beit Sh'ean valley, the Negev dessert, and the Galilee. The geographic distribution of market integration among settlements remains constant, with kibbutzim displaying lower levels of market integration than the moshavim in every geographic location, even in the agriculturally fertile coastal plain and Jezreel valley. That market integration among the kibbutzim remains lower than the moshavim regardless of their geographic location implies that these two settlements served two different functions. Even when the potential existed for greater market integration - as in the agriculturally fertile regions of Palestine - the kibbutzim always resisted integrating with external markets. This result demonstrates that the kibbutzim were not simply isolated from economic markets due to where they were constructed, but that market isolation was a deliberate strategy among kibbutzim throughout Palestine implemented to ensure that those settlements could maintain a comparative institutional advantage (Hall and Soskice 2001) in the production of joint goods like military defense.

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<sup>6</sup>In order, the kibbutz parties are: HaKibbutz HaDati (the religious kibbutz movement), Hever HaKuvvtzot, HaShomer HaTzair, Kibbutz Meuhad, and Kibbutz Artzi.

The moshavim display average levels of market integration regardless of where they were settled. That is, even when moshavim were settled in rural areas like the Negev, or the rocky and mountainous Galilee, they displayed levels of market integration substantively similar to moshavim located in the coastal plain. This shows that contrary to the kibbutzim, the moshavim were constructed across all areas of Palestine to provide for the economic growth of the Jewish community. The following subsections break down levels of market integration among the kibbutzim and moshavim into their respective geographic locations.

#### The Coastal Plain

The kibbutzim and moshavim of the coastal plain display average levels of market integration when compared to Table 3. Table 4 presents the results of a difference of means test conducted on the sample of moshavim and kibbutzim located in the coastal plain.

Table 4.4: Levels of Market Integration among Settlements of the Coastal Plain<sup>7</sup>

Type	Private Property	Hired	Work In Settlement	Social Ties	Public Sector
Kibbutzim	0.00	0.00	0.68	0.44	0.14
Moshavim	0.18	0.08	0.43	0.39	0.06

As is clear from Table 4, the kibbutzim and moshavim do not substantively differ from the national average in terms of market integration. Comparing the mean values in Table 4 with those in Table 3, the kibbutzim display exactly the same proportion of both hired individuals and private property ownership. The mean value of individuals working inside a given kibbutz differs by only one percent (0.68 to 0.67), as does the size of the public sector for a kibbutz located in the coastal plain (0.14 to 0.15). The strength of social ties among the kibbutzim of the

<sup>7</sup>All differences of means significant at  $p < 0.05$ , as is the case for all tables in this section.

coastal plain is three percent higher (0.44 to 0.41). All considered, the kibbutzim of the coastal plain, though located in the most economically profitable area of Palestine, were no more integrated into external economic markets than were their national counterparts.

As is the case for the kibbutzim of the coastal plain, the moshavim located there also displayed levels of market integration on par with their national counterparts. The mean values for the proportion of hired individuals and the size of the average moshav's public sector in the coastal plain are exactly the same as their national average. The proportion of settlers owning private property in the moshavim of the coastal plain is two percent higher than the national average (0.18 to 0.16), while the mean values for the percent of workers working inside of a moshav in the coastal plain and the strength of social ties in the same moshavim differ by only one percent from their national average (0.43 to 0.44 and 0.39 to 0.40 respectively). What Table 4 provides is evidence that neither the kibbutzim nor the moshavim of the coastal plain deviate from the average levels of market integration found among similar settlement types nationally, and that despite being located in the most agriculturally profitable area in Palestine, the kibbutzim display their characteristic distance from market forces, while the moshavim remain comparatively more integrated with those same market forces.

#### The Jezreel Valley

As is the case for the settlements located in the coastal plain, the kibbutzim and moshavim located in the Jezreel valley - another agriculturally fertile area of Palestine - did not differ substantively from their average national levels of market integration.



Table 5 shows the results of a difference of means test conducted on the kibbutzim and moshavim located in the Jezreel valley. The results demonstrate that the settlements located there did not deviate from their national average levels of market integration.

The moshavim and kibbutzim of the Jezreel valley differed only in two respect, in the percent of settlers owning private property and the proportion of settlers working within their respective settlements. The kibbutzim of the Jezreel valley differ from their national counterparts by three percent of settlers working within their respective kibbutzim. The moshavim of the Jezreel valley display a one percent greater proportion of settlers owning private property (0.17 to 0.16) and two percent fewer settlers working within their respective moshavim. Otherwise, all means are statistically the same between the kibbutzim and moshavim of the Jezreel valley.

Table 4.5: Levels of Market Integration among Settlements of the Jezreel Valley

Type	Private Property	Hired	Work In Settlement	Social Ties	Public Sector
Kibbutzim	0.00	-	0.64	-	-
Moshavim	0.17	-	0.42	-	-

### The Negev

The kibbutzim and moshavim of the Negev continue to provide evidence that no matter where they were located, the kibbutzim always kept their characteristic distance from external markets, while moshavim were comparatively more integrated. Again, this demonstrates that kibbutzim were not isolated from external markets simply because of where they they were located, and the moshavim were not comparatively more integrated because the majority of them were located in placed

like the coastal plain or the Jezreel valley. Rather, market isolation among the kibbutzim was national in scope, as was market integration among the moshavim.

Table 4.6: Levels of Market Integration among Settlements of the Negev Desert

Type	Private Property	Hired	Work In Settlement	Social Ties	Public Sector
Kibbutzim	0.00	-	0.69	-	0.15
Moshavim	0.19	-	0.40	-	0.09

The kibbutzim of the Negev display mean values equal to the national average of individuals holding private property and the size of their public sectors. The kibbutzim of the Negev differ from their national siblings by having two percent more of their population working within their given kibbutz. The Negev moshavim have a three percent greater share of their settlers who owned private property (0.19 to 0.16) while having four percent fewer settlers working within their respective moshavim. The moshavim of the Negev have, on average, a three percent large public sector than their national counterparts, though this anomaly is most likely due to the small number of moshavim founded in the Negev. There were eight moshavim founded in the Negev as opposed to eighteen kibbutzim.

#### The Galilee

The kibbutzim and moshavim of the Galilee are a bit anomalous in that they appear to be more similar than different, though the moshavim are still comparatively more integrated into external markets than the kibbutzim of the same area. The kibbutzim and moshavim of the Galilee differ in just one respect - the proportion of individuals owning private property. While the kibbutzim of the Galilee all have zero members owning private property, the moshavim located there display lower levels of property ownership than the moshavim as a national whole (0.13 to 0.16). As with

the settlements of the Negev, this result might be due to a small sample size.

Fifteen moshavim were founded in Galilee, as opposed to twenty-eight kibbutzim.

Table 4.7: Levels of Market Integration among Settlements of the Galilee

Type	Private Property	Hired	Work In Settlement	Social Ties	Public Sector
Kibbutzim	0.00	-	-	-	-
Moshavim	0.13	-	-	-	-

#### The Beit She'an Valley

The Beit She'an valley runs along the Jordan river valley on Israel's eastern border with Jordan from the Sea of Galilee to the Dead Sea. As such, it was a primary line of defense for the Jewish community. Arab forces moving from east to west, as the Jordanian and Iraqi troops did in 1948, would have to cross this valley to strike at the heart of the Jewish community. Many of the first kibbutzim were founded in the Beit She'an valley due to the possibility that the Judean desert might be made fertile with irrigation from the Jordan river, but the lure of economic profitability here was always tempered by the ever present threat of attack. For this reason, an equal number of kibbutzim and moshavim, fourteen each, were constructed in the Beit She'an valley. As is the case with kibbutzim and moshavim across the rest of Palestine, the kibbutzim were comparatively more isolated from market forces in the valley than were the moshavim. Table 7 provides evidence of this.

Table 4.8: Levels of Market Integration among Settlements of the Beit She'an Valley

Type	Private Property	Hired	Work In Settlement	Social Ties	Public Sector
Kibbutzim	0.00	-	0.63	-	-
Moshavim	0.19	-	0.40	-	-

The moshavim of the Beit She'an valley are similar to other moshavim throughout Palestine, if a bit more integrated in external markets. The Beit She'an moshavim display a three percent greater proportion of settlers owning private property (0.19 to 0.16) and four percent fewer settlers working inside their respective moshav (0.40 to 0.44). Although these moshavim were settled at the most eastern edge of Palestine, they were, if anything, a small bit more integrated into external markets than moshavim nationally. The same cannot be said of the kibbutzim in the Beit She'an valley. Again, these kibbutzim totally banned private property, but had a slightly smaller proportion of settlers working outside of the kibbutz (0.63 to 0.67).

#### Markets, Settlements and Public Goods

Across Palestine, the moshavim and kibbutzim displayed large differences with respect to how integrated each type of settlement was with external markets. On average, the moshavim displayed much higher levels of market integration than did the kibbutzim. This difference, moreover, is not simply due to geographical proximity to markets or other features of where the settlements were built. Even in the most remote areas of Palestine, the moshavim displayed comparatively higher levels of market integration than did the kibbutzim. That the national level averages displayed in Table 4.3 are not an artifact of geographic location reveals an important insight into the purposes the JNF and JA had for constructing these different types of settlements. The greater levels of market integration among the moshavim demonstrates that these settlements were constructed, regardless of their geographic location, to provide for the development and growth of Jewish economic markets.

Regardless of where they were constructed, the moshavim always displayed comparatively greater levels of market integration than the kibbutzim.

The comparatively lower levels of market integration displayed by the kibbutzim suggests that these were settlements constructed for a purpose other than growing the Jewish economy. The evidence presented up to this point indicates that the kibbutzim were constructed by the JNF and JA to provide military defense to the Jewish community. The following section will more thoroughly explain the linkage between the absence of market forces in the kibbutzim and those settlement's comparative advantage in providing military security. But, the lack of market integration among kibbutzim regardless of geographic location indicates that those settlements were constructed for a separate task than were the moshavim.

The difference in market integration between the kibbutzim and moshavim across geographic areas also supports Hypotheses 1 and 2 provided in Chapter 3. The moshav served as a *basin of attraction* which altered the distribution of pro-social and self-regarding types of individuals in favor of self-regarding types in the moshavim. The institutional environment of the kibbutz, because it was isolated from market forces, influenced the evolution of more pro-social behavior. That these patterns of behavior - higher proportions of self-regarding behavior in the moshavim and more pro-social behavior in the kibbutzim - remained constant throughout Palestine is indicative of the ability of these settlements to instill different norms of social behavior throughout their respective populations.

The next section explores more systematically the ability of market forces to shape social behavior. Using a series of regression analyses, it is demonstrated that settlements more tightly integrated with market forces served to grow and develop the Jewish economy while settlements that were more isolated from those same

market forces were more likely to provide military security to the Jewish community. It is to a test of this hypothesis that this dissertation now turns.

### *Market Integration and Economic Development*

This section presents evidence demonstrating that settlements more tightly integrated into Jewish markets played a vital role in growing and developing the Jewish economy. Table 9 reports the regression results for a series of maximum likelihood regressions where the dependent variable is the proportion of settlers owning private property. Since the dependent variable lies on the interval (0,1), and is not normally distributed, the beta distribution is most appropriate for fitting the model to the data. The evidence generated by the multiple regressions demonstrates that market integration had substantial effects on the growth and development of the Jewish economy. These results are robust across all model specifications.

All measures of market orientated economic activity across settlements are positively correlated with economic development, though only one, the proportion of hired settlers, reaches traditional levels of statistical significance. Further, all variables measuring a settlement's isolation from external markets, that is the variables measuring the proportion of settlers working in their settlement, the size of a settlement's public sector, and the strength of social ties, are all negatively correlated with economic development. These results indicate that only those settlements integrated into the external Jewish economy contributed to its growth and development. Settlements isolated from external markets did not significantly contribute to Jewish economic productivity.

Table 4.9: Beta Regression Models for Economic Production by Settlements

	Model 1	Model 2	Model 3	Model 4
Working In Settlement	-1.73*		-1.53*	-0.87*
	(0.41)		(0.61)	(0.32)
Outside Options	1.23		1.32	0.67
	(0.68)		(0.73)	(0.40)
Public Sector	-8.07*		-1.32*	-3.60*
	(1.53)		(1.56)	(0.75)
Social Ties	-2.59*		-3.15*	-1.64*
	(0.59)		(0.76)	(0.39)
Proportion Hired	4.30*		4.57*	2.74*
	(0.87)		(1.09)	(0.60)
<b>Alternative Explanations</b>				
Population		<del>-4.47e-04</del>	<del>-1.68e-04</del>	<del>-1.13e-04</del>
		(4.11e-04)	(3.68e-04)	(1.94e-04)
Settlement Area		<del>-6.61e-05</del>	<del>-2.51e-05</del>	<del>-1.48e-05</del>
		(3.25e-05)	(2.86e-05)	(1.61e-05)
Proportion Males		-2.21	2.57	1.42
		(2.04)	(1.78)	(0.94)
Mode Age		0.01*	0.006	0.001
		(0.00)	(0.003)	(0.003)
Monitoring		-0.04	0.002	0.03
		(0.09)	(0.008)	(0.44)
Security Threat		-0.17*	-0.14*	-0.07*
		(0.07)	(0.05)	(0.02)
Rural		<del>4.23e-04</del>	<del>-6.82e-04</del>	<del>-3.78e-04</del>
		(5.46e-04)	(3.94e-04)	(2.26e-04)
Ethnic Fractionalization				0.01
				(0.04)
Intercept	-0.73	-0.62	-1.94	-1.23*
	(0.67)	(1.17)	(1.05)	(0.58)
<i>N</i>	270	211	211	211
AIC	-251.06	-159.31	-223.50	-221.61
BIC	-232.83	-137.12	-188.98	-184.62
log <i>L</i>	132.53	88.65	125.75	125.80

Standard errors in parentheses

\* indicates significance at  $p < 0.05$

Market integration strongly effects economic output by settlements<sup>89</sup>. A one percent change in the proportion of hired settlers increases the likelihood that a settlement contributed to the growth of the Jewish economy between 4.75 and 51 times, controlling for all other conditions in the model. All measures of a settlement's isolation from external markets demonstrate that market isolation decreased the likelihood that a settlement would contribute to economic development, but the substantive effects of market isolation are much smaller in magnitude. For a one percent change in the proportion of settlers working within the settlement, the production of consumable goods necessary to develop Jewish markets fell between 0.02 and 0.07 times. Further, a one percent increase in the size of a settlement's public sector decreased the likelihood of a settlement producing consumer goods between 0.006 and 0.01 times. Finally, a one percent increase in the strength of social ties within a settlement decreased the odds a settlement would contribute to the growth of the Jewish economy between 0.08 and 0.42 times.

When comparing the nested models, it is clear that market integration explains the ability of settlements to contribute to the growth of the Jewish economy better than other competing explanations. First, both the AIC and BIC are minimized for Model 1 which considers only measures of market integration and isolation, indicating that model is the best fit for the data and offers the most explanatory power of the other nested models. The model fits become steadily worse as alternative explanatory variables and other controls are considered. Model 2, which considers standard collective action explanations like population size, a group's monitoring capacity, and other controls is the least well fitting model among

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<sup>8</sup>Since the beta distribution contains a logit link function, it is possible to interpret the beta coefficients as changes in the odds of success by computing the odds ratios

<sup>9</sup>The analysis here is restricted to Model 4, as it offers a full compliment of controls for alternative explanations.



the four. Alternative explanations drop out of significance in Models 3 and 4, while explanations based on market integration remain significant. This indicates that market integration among settlements explains the ability of settlements to grow and develop the Jewish economy.

#### *Market Isolation and Military Security*

If settlements that were integrated into broader Jewish economic markets contributed to the growth and development of the Jewish economy, settlements that were isolated from those same market forces contributed to providing military security for the Jewish community. Table 4.10 reports probit regression results which demonstrate that settlements isolated from the evolutionary pressures of the market contributed to the production of costly joint goods like security at a higher rate than did those settlements that displayed higher levels of market integration. These results demonstrate the different effects markets had on the production of different public goods. While market integration assisted the efficient distribution of public goods produced by the uncoordinated actions of self-interested individuals, the production of jointly produced public goods, like security, declined as settlements became more tightly integrated with external markets.

Whereas measures of market integration were positively and significantly correlated with economic growth, the signs of those variables have now switched or lost significance. Further, where measures of market isolation were negatively correlated with economic production, those same variables are now *positively* correlated with the production of military security. The variables measuring the public sector, strength of social ties, and the proportion of settlers working within their respective settlement all demonstrate that isolation from capitalist markets increased the probability that a settlement would provide military security.

Table 4.10: Probit Regression Models for Security Provision by Settlements

	Model 1	Model 2	Model 3	Model 4
Working In Settlement	0.55*		1.05*	1.02*
	(0.28)		(0.43)	(0.44)
Private Property	0.35		0.46	0.44
	(0.27)		(0.37)	(0.36)
Outside Options	-0.97*		-1.07*	-1.24*
	(0.23)		(0.29)	(0.31)
Public Sector	0.49*		0.54*	0.54*
	(0.20)		(0.26)	(0.26)
Social Ties	0.50*		1.38*	1.40*
	(0.24)		(0.45)	(0.46)
Proportion Hired	0.14		-0.09	-0.01
	(0.23)		(0.29)	(0.30)
<b>Alternative Explanations</b>				
Population		-0.22	-0.51	-0.61*
		(0.21)	(0.29)	(0.31)
Settlement Area		0.23	0.42	0.39
		(0.18)	(0.23)	(0.24)
Proportion Males		-0.50*	-0.53	-0.58
		(0.24)	(0.35)	(0.37)
Mode Age		0.33*	0.63*	0.62*
		(0.17)	(0.21)	(0.21)
Monitoring		-0.11	0.37	0.40
		(0.29)	(0.33)	(0.37)
Security Threat		0.03	-0.24	-0.23
		(0.17)	(0.21)	(0.22)
Rural		-0.43	-0.57	-0.53
		(0.54)	(0.67)	(0.71)
Ethnic Fractionalization				0.58
				(0.35)
Intercept	-1.83*	-1.58*	-2.09*	-2.25*
	(0.20)	(0.21)	(0.30)	(0.33)
<i>N</i>	270	211	211	211
AIC	230.56	214.59	192.04	191.05
BIC	331.32	321.85	379.75	392.16
log <i>L</i>	-87.28	-75.29	-40.02	-35.52

Standard errors in parentheses

\* indicates significance at  $p < 0.05$

The substantive effects of market isolation on the provision of military security by settlements are substantial<sup>10</sup>. A one percent increase in the proportion of settlers working within their respective settlement increased the propensity of that settlement to provide military security between 1.17 and 6.75 times. The strength of social ties between members also had large effects on the propensity of a settlement to provide military security. A one percent increase in the strength of social ties increased a settlement's provision of security by a factor between 1.71 and 10.47 times. As the size of a settlement's public sector grew, so did its ability to provide defense for the Jewish community. A one percent increase in the size of a settlement's public sector increased the likelihood that a settlement would provide security between 1.04 and 2.90 times. Not all factors contributed to an increase in the production of defense, however. To the extent that individuals within settlements had employment options in outside labor markets, they were less likely to engage in high risk collective action to provide military security. A one percent increase in the ability of such individuals to be hired in outside markets reduced the probability that a settlement would provide security between 0.15 and 0.52 times.

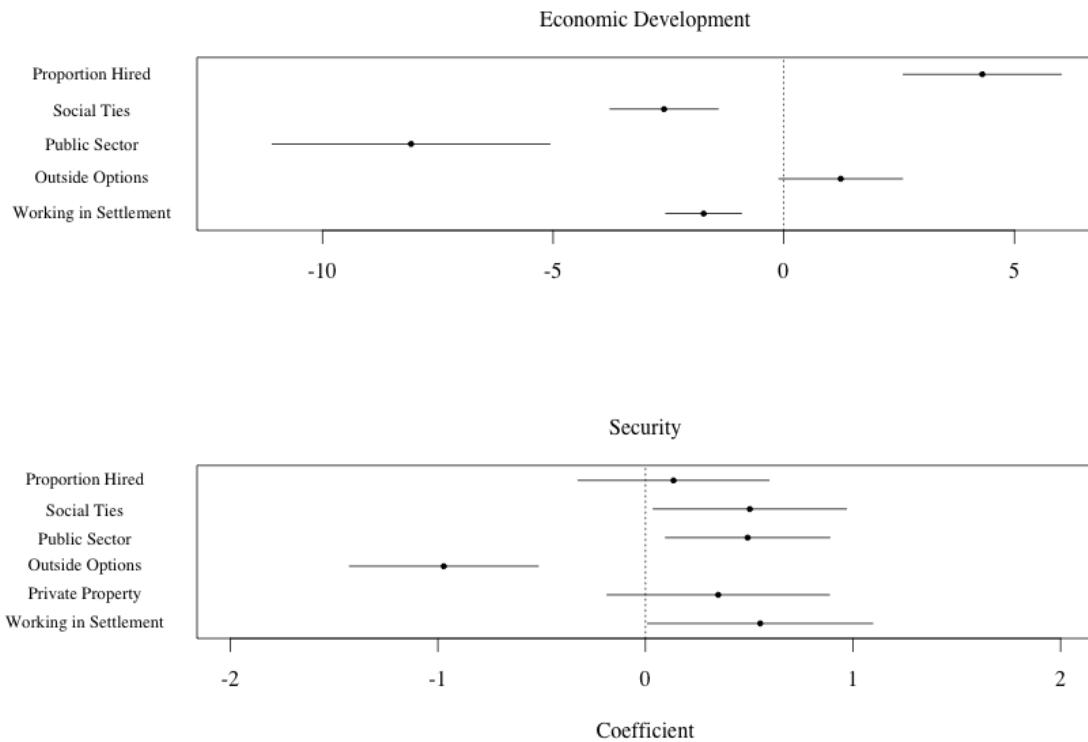
Figure 4.4 demonstrates that market integration positively influenced the production of consumer goods necessary to grow and develop the Jewish economy while harming a settlement's ability to provide military security. Figure 4.4 shows coefficient plots for model 1 from Tables 4.9 and 4.10. The coefficient plots clearly demonstrate the opposing effects generated by market integration on the production of economic growth and military security. All variables measuring market integration positively predict the ability of a settlement to grow and develop the Jewish economy, but also predict that settlement would fail to provide military

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<sup>10</sup>As with the previous analysis, I restrict my analysis here to model 4, as it controls for all other factors theorized to be important predictors of public goods provision.

security. This result strongly supports Hypotheses 1 and 2: market integration induced populations to behave selfishly and provide consumer goods necessary for economic growth while market isolated influenced the evolution of pro-social behavior. Where settlements were isolated from the evolutionary effects of capitalism, those settlements held a comparative advantage in providing military security. Market integration served as a basin of attraction, influencing populations within settlements that sustained their economic livelihood from capitalistic market forces to behave in self-regarding manners. Pro-social behavior evolved in settlements isolated from the evolutionary pressures of capitalism. Populations within the kibbutzim and moshavim were entirely bifurcated into homogenous populations consisting of pro-social or self-regarding types of individuals.

Figure 4.4: Effects of Market Integration and Production of Security and Economic Growth by Settlements



It is clear from these logistic regressions that market integration is the primary force explaining security provision by settlements. First, Model 1 shows a good fit to the data. Its BIC is low, being only ten points higher than the lowest BIC of Model 2. Most variables in Model 2, however, fail to reach traditional levels of statistical significance. The boost in explanatory power offered by Model 1 at the expense of a ten point rise in BIC is an acceptable tradeoff to conclude that market forces effected the production of military security. Further, Model 4's AIC is lowest, demonstrating that it too, fits the data relatively well. While Model 4's BIC is highest, the BIC favors more parsimonious models and penalizes models which include extra control variables (Hastie, Tibshirani, and Friedman 2009). The AIC is more forgiving of models which include alternative control variables. Since the AIC is minimized in Model 4, and this model shows market integration to be a significant explanatory factor in security production, I conclude that level of market integration did in fact influence security production among kibbutzim and moshavim, but the effects market integration had on a settlement's ability to provide security were opposite to the effects market integration had on the ability of a settlement to grow the Jewish economy.

#### Robustness of Results to Alternative Explanations

This section tests the robustness of the results found in Tables 4.9 and 4.10 to alternative explanations. Table 4.11 replicates the analysis from Table 4.9 while Table 4.12 replicates the analysis from Table 4.10, but Model 5 in Tables 4.11 and 4.12 considers two competing explanations for the ability of settlements to provide security: ethnic fractionalization and ideology. The regression tables are reported on the pages below.

Table 4.11: Economic Growth Models: Robustness Checks

	Model 1	Model 2	Model 3	Model 4	Model 5
Working In Settlement	-1.73*		-1.53*	-0.87*	-0.72
	(0.41)		(0.61)	(0.32)	(0.58)
Outside Options	1.23		1.32	0.67	1.83*
	(0.68)		(0.73)	(0.40)	(0.68)
Public Sector	-8.07*		-1.32*	-3.60*	-9.66*
	(1.53)		(1.56)	(0.75)	(1.50)
Social Ties	-2.59*		-3.15*	-1.64*	-2.09*
	(0.59)		(0.76)	(0.39)	(0.67)
Proportion Hired	4.30*		4.57*	2.74*	2.18*
	(0.87)		(1.09)	(0.60)	(1.06)
<b>Alternative Explanations</b>					
Population		-4.47e-4	-1.68e-4	-1.13e-4	-2.32e-4
		(4.11e-4)	(3.68e-4)	(1.94e-4)	(3.17e-4)
Settlement Area		-6.61e-5	-2.51e-5	-1.48e-5	-8.48e-6
		(3.25e-05)	(2.86e-05)	(1.61e-05)	(2.51e-5)
Proportion Males		-2.21	2.57	1.42	2.26
		(2.04)	(1.78)	(0.94)	(1.56)
Mode Age		0.01*	0.006	0.001	6.48e-3
		(0.00)	(0.003)	(0.003)	(4.80e-4)
Monitoring		-0.04	0.002	0.03	-0.34
		(0.09)	(0.008)	(0.44)	(0.72)
Security Threat		-0.17*	-0.14*	-0.07*	-0.09
		(0.07)	(0.05)	(0.02)	(0.05)
Rural		4.23e-4	-6.82e-4	-3.78e-4	-4.79e-4
		(5.46e-4)	(3.94e-4)	(2.26e-4)	(3.44e-4)
Ethnic Fractionalization				0.27	0.50
				(0.90)	(0.77)
Ideology					-0.55*
					(0.12)
Intercept	-0.73	-0.62	-1.94	-1.23*	-3.03*
	(0.67)	(1.17)	(1.05)	(0.58)	(0.99)
$N$	270	211	211	211	211
AIC	-251.06	-159.31	-223.50	-221.61	-240.41
BIC	-232.83	-137.12	-188.98	-184.62	-200.95
$\log L$	132.53	88.65	125.75	125.80	136.20

Standard errors in parentheses

\* indicates significance at  $p < 0.05$

Table 4.12: Military Security Models: Robustness Checks

	Model 1	Model 2	Model 3	Model 4	Model 5
Working In Settlement	0.55*		1.05*	1.02*	0.82
	(0.28)		(0.43)	(0.44)	(0.46)
Private Property	0.35		0.46	0.44	0.73
	(0.27)		(0.37)	(0.36)	(0.39)
Outside Options	-0.97*		-1.07*	-1.24*	-1.27*
	(0.23)		(0.29)	(0.31)	(0.32)
Public Sector	0.49*		0.54*	0.54*	0.53*
	(0.20)		(0.26)	(0.26)	(0.26)
Social Ties	0.50*		1.38*	1.40*	1.33*
	(0.24)		(0.45)	(0.46)	(0.50)
Proportion Hired	0.14		-0.09	-0.01	0.14
	(0.23)		(0.29)	(0.30)	(0.31)
Population		-0.22	-0.51	-0.61*	-0.82*
		(0.21)	(0.29)	(0.31)	(0.38)
Area		0.23	0.42	0.39	0.33
		(0.18)	(0.23)	(0.24)	(0.26)
Proportion Males		-0.50*	-0.53	-0.58	-0.60
		(0.24)	(0.35)	(0.37)	(0.38)
Mean Age		0.33*	0.63*	0.62*	0.49*
		(0.17)	(0.21)	(0.21)	(0.22)
Monitoring		-0.11	0.37	0.40	0.53
		(0.29)	(0.33)	(0.37)	(0.39)
Security Threat		0.03	-0.24	-0.23	-0.33
		(0.17)	(0.21)	(0.22)	(0.23)
Rural		-0.43	-0.57	-0.53	-0.27
		(0.54)	(0.67)	(0.71)	(0.62)
Ethnic Fractionalization				0.58	0.53
				(0.35)	(0.36)
Ideology					0.79*
					(0.36)
Intercept	-1.83*	-1.58*	-2.09*	-2.25*	-2.40*
	(0.20)	(0.21)	(0.30)	(0.33)	(0.35)
$N$	270	211	211	211	211
AIC	230.56	214.59	192.04	191.05	187.98
BIC	331.32	321.85	379.75	392.16	402.49
$\log L$	-87.28	-75.29	-40.02	-35.52	-29.99

Standard errors in parentheses

\* indicates significance at  $p < 0.05$

As the columns for Model 5 in both Tables 4.11 and 4.12 show the effect of ethnic fractionalization is indistinguishable from zero in both regressions. The variable fails to reach traditional levels of statistical significance in with regression. It's sign positive in the both regressions. This is problematic in terms of the security regressions where the sign of this variable runs counter to the expectations of a wealth of literature examining the effects of ethnic fractionalization on the production of public goods (Alesina et al.1999; Alesina 2003; Alesina and La Ferrara 2005; Habyarmania et al. 2007; Baldwin and Huber 2010). Since this variable fails to reach traditional levels of statistical significance in either regression, I can safely conclude that ethnic fractionalization has no substantive effect of the ability of a settlement to provide military security or economic growth.

The null hypothesis for ideology, however, is rejected as the variable is within traditional levels of statistical significance and its sign is in the expected, positive, direction for the security regressions, and negative - again the expected direction - in the economic growth regressions. However, even with the inclusion of the ideology variable, measures of market integration still retain their explanatory power. Only one variable, the proportion of settlers working within their respective settlements, drops out of statistical significance in Model 5 for both Tables 4.11 and 4.12.

The explanatory power of the ideology variable is not problematic. I do not believe the Israeli historians are incorrect in assigning explanatory power to ideology. I do think, however, that their story is backward. Rather than ideology determining the propensity for individuals to engage in collective action, it is possible that a settlement's institutional structure influenced the ideology of a particular settlement. If a settlement's relationship with markets facilitated the evolution of pro-social behavior within a settlement, it is also likely that the



individuals who lived within those settlements would alter their ideology to conform with the mean ideology of a particular settlement. That is, if a settlement was isolated from market forces, not only would social behavior evolve towards a more pro-social mean, but the thinking patterns, or the ideology, of the members of a particular settlement would also evolve towards a more socialistic mean. Hence, the ideology of a settlement is endogenous to its relationship with market forces.

Evidence is given for this proposition in Table 4.13.

Table 4.13: Market Integration and Settlement Ideology Ideology: Alternative Explanations

	Model 1
Working In Settlement	3.62*
	(0.71)
Outside Options	-1.97
	(1.09)
Public Sector	5.54*
	(1.21)
Social Ties	1.37
	(0.95)
$N$	270
$\log L$	-336.75

Standard errors in parentheses

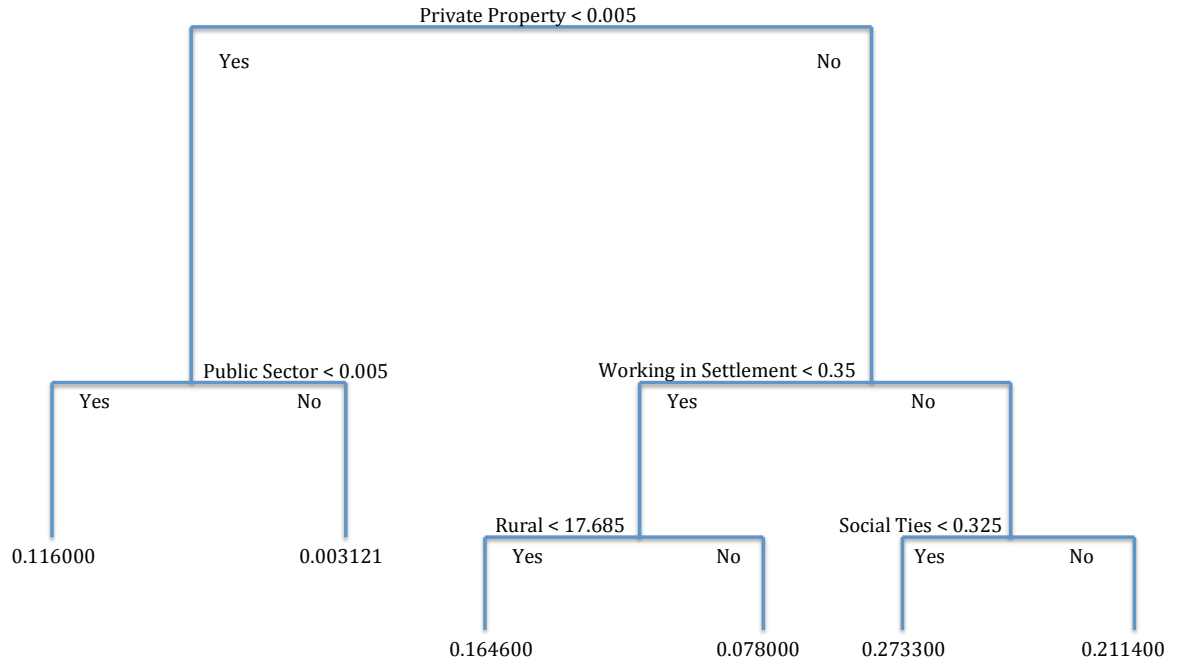
\* indicates significance at  $p < 0.05$

Table 4.13 shows the results of an ordered logistic regression using Ideology as the dependent variable. As the table demonstrates, a settlement's ideology is highly correlated with measures of market integration. Measures of market isolation, like the proportion of individuals working within their respective settlements and the size of a settlement's public sector are all positively and significantly correlated with a more socialistic ideology. The sign of the one included measure of market integration, outside options, is in the expected direction, but the variable is not statistically significant.

Of course Table 4.13 does not fully solve the endogeneity problem. It may be the case that a settlement was isolated from market forces *because* it was founded by ideologically committed socialists. Table 4.13 does not address which direction the causal arrow runs. To address the direction of the causal arrow, a more thorough investigation of the data is needed. Figure 4.5 graphically displays the output from a nonparametric statistical technique known as Classification and Regression Trees, or CART (Brieman et al. 1984). CART uses a set of observed predictors to partition the data recursively until the classes or values of the response variable in each sub-partition become fairly homogeneous (Siroky 2009). The graphical output of CART displays a regression (for numeric) or classification (for factor) response that is tree-like and can be easily interpreted. Each "branch" of the tree is a variable, and as long as the branch does not lead to a terminal node (i.e. a node with no other branches coming off of it), the structure of the tree continues. Figure 4.5 displays the regression tree for the private property dependent variable. All variables shown in Model 5 from Tables 11 and 12 were selected as candidates for preceptors to be used in the regression tree. The CART algorithm picked 5 variables to partition the data. As can be shown from Figure 4.5, only measures of market integration were used to construct the tree.

Figure 4.5 should be read as: “does a settlement have less than 0.005% of the population owning private property? If yes, then the Public Sector variable partitions the data next. If not, then the Working in Settlement variable partitions the data”. If the Public Sector variable partitions the data, two terminal nodes are arrived at. The next question the algorithm asks is, “Is the size of this settlement’s Public Sector less than 0.005%? If yes, then this settlement has an 11% chance of providing for the economic growth of the Jewish economy”. The analysis is likewise

Figure 4.5: Regression Tree - Private Property



for the No answer, and all other variables.

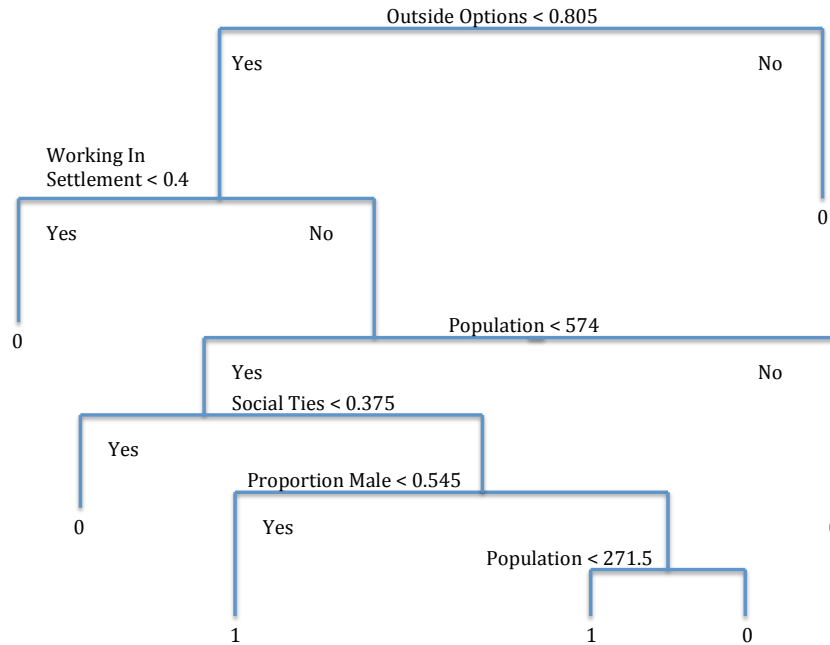
Recall the descriptive statistics reported in Table 4.3. The mean value for the Private Property variable for the kibbutzim is zero. Likewise, the average kibbutz's public sector is equal to 15% of the population. This means that the average kibbutz would answer yes to the first question, dropping down to the Public Sector branch of the tree, where it would answer no to the second question. Hence, the average kibbutz has a .003% chance of contributing to the growth of the Jewish

economy. The average moshav, by contrast, would end up at the rightmost terminal node, where it has a 21% of contributing to economic growth, an increase in the probability of contributing to the economic development of the Jewish community of 64 times. Moshavim that were comparatively more integrated into external markets by virtue of having a mean values of *social ties* less than 0.325 had a 27% chance of developing the Jewish economy - a probability of contributing to the economic growth of the Jewish community 91 times higher than the average kibbutz.

As can be seen from Figure 4.5, the Ideology variable has no explanatory power when investigating the ability of a kibbutz or moshav to engage in the production of private property necessary to grow the Jewish economy. All variables used to construct the tree measure a settlement's relationship to external markets. This is consistent with the results shown in Table 4.11, where measures of market integration were positively correlated with the ability of a settlement to provide for economic growth, and where measures of market isolation were negatively correlated with that ability. The ideology variable was negatively correlated with the production of economic growth in Table 4.11, but is never selected by the CART algorithm in Figure 4.5.

The Israeli historical literature mainly discusses the impact of ideology on the kibbutzim and their ability to provide military security. If the Ideology variable is not selected by the CART algorithm to explain a settlement's ability to provide security, this would cast further doubt on this explanation. Figure 4.6 presents the classification tree (the dependent variable, Tower and Stockade, is binary) which examines which variables offer explanatory power for a settlement to provide military security.

Figure 4.6: Classification Tree - Security Provision



As is clear from Figure 4.6, ideology offers no explanatory power to the model. Nearly all variables that explain a settlement’s ability to provide military security are variables measuring a settlement’s relationship to economic markets. Further, as can be seen from the first branch, settlements where individuals had excellent chances of employment in outside labor markets had a zero percent chance of contributing to the defense of the Jewish community. Settlements that were predicted to provide security to the Jewish community (where terminal nodes are

marked with 1, for a 100% probability of providing defense) were characterized by relatively low outside options (below a kibbutz's mean value of .82), a high proportion of individuals working within the kibbutz, a relatively small population, strong social ties, and less than 55% of males comprising the population of a settlement, or a very small population of less than 271 individuals. Ideology never appears as an explanatory variable in Figure 4.6 while variables measuring market relationships offer very high degrees of explanatory power. Chapter 5 will expand on the insufficiency of an ideological explanation, as well as offering evidence to support the hypothesis that the development of a socialist settlement ideology was a function of market relationships rather than the other way around.

#### Conclusion

This chapter has provided statistical evidence to demonstrate that market forces differentially impacted the ability of the kibbutzim and moshavim to provide critical public goods. Settlements that were tightly integrated into Jewish economic markets, like the moshavim, were more apt to hold a comparative institutional advantage in the ability to grow and develop the Jewish economy. Settlements, like the kibbutzim, that were more isolated from capitalist market forces were more likely to provide military security. The data presented in this chapter support an explanation based on the premises of the evolutionary model laid out in the previous chapter. Where individuals existed inside of institutions which rewarded self-regarding behavior, those individuals were more likely to behave in a self-regarding manner by exploiting private property for personal economic gains. They were also more likely to have more profitable outside options and were more likely to hire others or be hired, all characteristic traits of institutions rewarding economic profit - or utility - maximizing behavior. Where market forces did not

influence social behavior within a settlement, more pro-social and cooperative behavior was likely to evolve. The kibbutzim, by erecting a dividing wall between market forces and the life of all kibbutz members, were able to limit the deleterious effects self-regarding behavior had on the propensity of individual kibbutzniks to engage in cooperation to provide military security to the Jewish community.

The following chapter will discuss the evolution of self-regarding and pro-social behavior within these two settlements over time and link the evolution of social behavior directly to market forces. The following chapter will also qualitatively document the security strategies employed by the Jewish Agency over time and document how the role of the kibbutz changed over time within those plans. While the statistical analysis presented in this chapter cannot directly address causation, by process tracing the effects of market forces within the early kibbutzim and moshavim, the next chapter will demonstrate the causal effects market integration had on influencing pro-social and self-regarding social behavior in the kibbutzim and moshavim respectively.

## Chapter 5

### SOCIAL BEHAVIOR IN THE KIBBUTZIM AND MOSHAVIM: THE FOUNDATIONS OF COMPARATIVE INSTITUTIONAL ADVANTAGE

Selfish and contentious people will not cohere, and without coherence, nothing can be effected. A tribe possessing...a greater number of courageous, sympathetic, and faithful members, who were always ready to warn each other of danger, to aid and defense each other...would spread and be victorious over other tribes...Thus the social and moral qualities would tend slowly to advance and be diffused throughout the world - Charles Darwin, *The Descent of Man* (1873)

The idea that “I’ve got it coming to me” is not a serious problem in our kibbutz. Our people do not go looking for material gains. Our work carries the same remuneration whether you have been doing it for twenty years and enjoying it or for thirty years and not enjoying it. The coin in which we are paid is the knowledge that we have done our share for our community -Criden and Gelb *The Kibbutz Experience* (1974)

The previous chapter examined statistical evidence demonstrating that variation in levels of market integration between the kibbutzim and moshavim facilitated the production of military security and economic development. It was shown that, because of their isolation from market forces, the kibbutzim were effective providers of security, while market integration among the moshavim made those institutions relatively more effective in providing economic growth and development to the Jewish community. This chapter elucidates this causal mechanism further by reference to historical patterns of social behavior among



individuals living in kibbutzim and moshavim. This chapter also provides evidence to support the claim that the Jewish National Fund and Jewish Agency were aware of the effects that markets had on social behavior, and chose to found kibbutzim and moshavim in particular locations and at particular times that were best suited to maximizing the advantage of each type of settlement. In order for the settlement of kibbutzim and moshavim to be understood as a strategy of governance, the settling of these institutions must have been strategic and not simply due to random chance. By examining the strategic decision making of the Jewish Agency, this chapter will demonstrate that the settlement of these two institutions was guided by the need to develop functioning economic markets and provide military security.

Recall dominant assumptions regarding stateless societies. Chapter 4 presented evidence suggesting that sub-nation political actors are indeed capable of providing the core functions of states including providing military security and developing economic markets. While the evidence regarding social behavior in the kibbutzim and moshavim had to be inferred from behavioral evidence in the previous chapter, this chapter traces the development of pro-social and self-regarding behavior in the kibbutzim and moshavim with regard to evidence that can explicitly demonstrate the plausibility of an evolutionary explanation. By examining behavior in the kibbutzim and moshavim across time, this chapter demonstrates how institutions develop in stateless societies, and how these institutions facilitate domestic stability. Rather than contributing to the spread of conflict, political instability, and human misery, non-Weberian political order, given the right circumstances, can promote social stability instead of undermining it.

Non-Weberian order can contribute to political, economic, and social stability given appropriate conditions. When local institutions serve broad public

interests rather than narrow parochial demands, and when those institutions reinforce norms necessary to sustain cooperation and collective action, stability can be achieved without the oversight of a sovereign, territorial state. In Palestine, variation in levels of market integration among the kibbutzim and moshavim influenced the provision of two different public goods. The previous chapter provided statistical evidence demonstrating market integration was positively correlated with the production of economic development by settlements while isolation from market forces positively influenced the production of military security. It is the task of this chapter to more fully understand why the presence or absence of market forces brought about the comparative institutional advantages of each settlement type. I will first proceed with a discussion of the early settlement of Degania in order to understand how an unstable mix of self-regarding and pro-social types existed in that initial population and how those two types later split from the Degania settlement nucleus to form two separate progeny: the kibbutz and the moshav. I will then analyze how self-regarding and pro-social behavior came to be institutionalized in these settlements and how the two types of behavior had important feedback effects, strengthening the institutional structure of the respective settlements. I will follow this discussion with an analysis of social sanction in the kibbutzim and moshavim, tying the development of sanctioning behavior to market forces in order to understand how market forces influenced solutions to the second order free rider problem. The chapter will conclude with an analysis of the settlement strategy adopted by the JNF and JA with regard to the kibbutzim and moshavim, dealing specifically with the question of what did the JNF and JA know about the ability of these settlements to provide public goods.

## Social Evolution: From Nucleus to Progeny

As stated in the Chapter 3, the first kibbutz, Degania, was founded on the shore of the Sea of Galilee in 1910. Eleven years later the first moshav, Nahalal, was founded. Many of Nahalal's founders had previously lived at, and built, Degania. The breakaway of Nahalal from Degania represents a critical juncture in the history of Zionist agricultural settlement in Palestine for it was at this moment that the kibbutzim and moshavim began to diverge from each other. But at one point both self-regarding and pro-social types existed within the same population at Degania. In order to analyze the evolutionary trajectory of the kibbutzim and moshavim, it is necessary to understand how they developed from the same population of agents. Recall that the Evolutionary Stable Strategy derived from the model in Chapter 3 contains two basins of attraction which tip the ESS towards a homogeneous population of all pro-social or self-regarding types. The evolution of the moshavim from within the kibbutz nucleus provides a way to analyze how two different patterns of behavior created two separate populations that then bifurcated into two different agricultural institutions.

Critical to understanding the development of Degania is understanding the young men and women who founded it and how their commitment to a specific type of social behavior laid the foundation for the institutional ability of the kibbutz to promote reciprocal altruism among its members and hence to maintain high levels of cooperation within its population. To understand the ability of the kibbutz to promote reciprocal altruism, the altruistic nature of its first settlers must be understood. Among the original founders of Degania were a handful of young men who later came to be known as the Romni group, from their hometown in Ukraine. These young men committed to living a communal lifestyle the moment they

boarded their ship to Palestine in 1907<sup>1</sup>. Arriving in Palestine, they worked as hired laborers in the emerging colony of Petah Tikva<sup>2</sup>. Foreshadowing a major feature of the kibbutz, they shared their wages and accommodations equally. They, like many immigrants to Palestine during the Second Aliya, were *halutzim*, or pioneers. The concept of the pioneer was seen to involve readiness to take on any necessary work, and to go - as a matter of personal pride and national necessity - to the hardest and most undeveloped areas of Palestine (Near 1985). Further, the pioneers willingly subjected themselves to extreme conditions by taking on the most difficult, urgent, and dangerous settlement tasks (ibid). The Romni group belonged to an organization known as Hahafia, whose program called for “building the land of Israel on collective foundations” (Near 1985; 182; Near 1992; 29). Hence, the founders of Degania were already imbued with a mode of social behavior that stressed equality, cooperation, collectivism, and cooperation. They would instill this propensity for pro-social behavior into the institutional structure of the kibbutz, ensuring the proliferation of pro-social behavior in other kibbutzim.

The Romni group was joined by two other groups of Jewish pioneers; a group who had previously worked at a farm known as Sejera and another which had worked for one year in the *moshava*, or private development town, Hadera. It is from within the Sejera group that the foundations for the institutional ability of the kibbutz to provide military security originated. Since they were communally organized, the Hadera group strengthened the collective tendencies of the kibbutz by increasing the number of settlers who behaved in a pro-social manner.

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<sup>1</sup>This section follows the history developed in (Near 1992; 20-57)

<sup>2</sup>Now a suburb of Tel Aviv

Though they worked in a private *moshava*, the Hadera group consciously rejected the capitalistic mode of production embedded in Hadera and left to seek opportunities for a more communal lifestyle elsewhere in Palestine after they had saved up enough capital after working the fields for one year.

In September of 1907, a small group of Jewish immigrants founded a small secret organization known as Bar Goria whose purpose was the protection of Jewish life and property. In many private towns, Arabs has been contracted to provide security services, but these individuals were not always reliable (Near 1992). This group found its way to Sejera. The Sejera group's leader, Manya Wilbushevitz, had been a member of the Social Revolutionary Party in Russia and was responsible for carrying out acts of terror against the Tsarist government there. Upon arriving in Palestine, she was convinced that the only way of settling the country was by the establishment of collective colonies. The Sejera group worked the farm communally for one year and made a small profit. It then disbanded at the end of the year to form *Hashomer*, the first Jewish self-defense organization. From that point on, Hashomer would make arrangements to defend settlements as a collective entity, a pattern they learned in the fields at Sejera. Another group, known as the Hadera group, worked the fields of individual farmers in the moshava of Hadera. While each individual in the Hadera group worked a different plot, they all pooled their resources communally. Like the Romni group, the Hadera settlers organized a communal life style and communal patterns of consumption that foreshadowed the communal institution of the kibbutz. Both the Sejera group and the Hadera group eventually made their way to Degania where they joined with the Romni group to found the first kibbutz.

The original founders of Degania sought to create a small collective settlement which they called a *kvutza*, the historical forerunner to the kibbutz. The institutional structure of Degania stressed the combination of communal production and communal consumption (Near 1985). Rejecting the previous tendency for work groups to engage in labor for a set period, then to break up and move on to another place, the settlers of Degania decided to remain settled and to build a permanent settlement. They aimed to live together as a close-knit community for the foreseeable future and even permanently. The permanence of settlement membership became a universal feature in kibbutzim that were to be established later (Near 1985).

The original nucleus of settlers soon expanded. By 1914, Degania was no longer a small group of individuals living on the shore of the Sea of Galilee. The kibbutz had grown to twenty-eight permanent residents, and some twenty more temporary and seasonal workers (Near 1992; 37). Population growth brought with it social instability. Tension emerged between the veteran members of the settlement, including the Romni group, and the younger members. While the general meeting of all settlement members was still the sovereign decision making body of the kibbutz, and all members theoretically had a say with regard to settlement affairs during the meeting, the day to day affairs of the kibbutz were decided by a committee of four veteran members. Tension arose between the younger members who were excluded from this committee, and the more veteran members of Degania. The younger members were eventually given a role in the decision making process, but tension between veteran members, like the original Romni settlers, and the youngsters remained a feature of Degania's social fabric until the Nahalal settlers broke away from the group. To reduce this social tension, a proposal was put forward by the

veteran members of Degania. In 1917 they put forward a plan to shrink the size of the kibbutz by returning some of its land to the JNF, and restricting membership to only ten families. In the words of one of Degania's founders,

“I believe that we should return to the past - not to the primitive way in which we used to live, but to the many positive aspects of our work then. We are not creators of ways of life for great multitudes; rather, we are an example for a small but idealistic group of people.” (Near 1992; 44).

In the autumn of 1919, Degania carried out the reforms spoken of two years prior and returned two-thirds of its land to the Zionist movement. The population of the settlement was not reduced, however. Rather, it increased during this time, bringing a more diverse group of people into Degania in terms of age and area of origin. The constant influx of new individuals served to increase tension within the settlement. A more heterogeneous group altered the distribution of preferences for desired social behavior among the settlers. The original settlers of Degania felt that the expansion of the kibbutz's population would bring about its demise and various discussions were held about what to do regarding the influx of new settlers.

Another factor served to increase tensions among the population. In 1914 every individual working at Degania was formally employed by the Zionist movement and each was paid a wage by the national organization. In a sense then, the settlers at Degania were incentivized directly by market mechanisms. Wage labor did not fit well within the communal ideology held by the original settlers and in 1919 the contract with the Zionist movement was altered so that the members of the kibbutz were no longer the direct employees of the Zionist movement but rather the settlement now leased its land from the Jewish National Fund under a long term contract (Near 1992; 55). Speaking with regard to the collectivist institutional

structure desired by the original settlement group, one of Degania's founders contended that collectivist institutions isolated from the effects of capitalism were critical to establishing a functioning and self-sustaining kibbutz.

"I perceive that, in the last resort, the kvutza, is the only way which can enable us to conquer agriculture. The young men who are about to arrive will also have to adopt a communal way of life, which relieves the individual from economic cares, and affords him the opportunity to live a productive life" (Near 1992; 52).

Attempting to reduce the increasing social tension between the veteran core and less pro-social youngsters, the original settlers of Degania turned inwards and attempted to close off their kibbutz to further Jewish immigration. The members of Degania refused to recruit people from outside of the kibbutz. Degania had always been a relatively closed community. But although the social core of the settlement was closely knit, the total population tended to be very volatile. In 1923, for example, there were forty-three members, eighteen of whom had been members of the kibbutz for no more than eighteen months, and twelve temporary workers. The forty-three members were all that remained of the 356 people who had passed through the entrance to the kibbutz in the previous twelve years (Near 1992; 94).

This autarkic mentality proved detrimental to the kibbutz's development, especially now that another form of settlement was gaining favor in the Zionist movement. The idea of the moshav was, by 1919, emerging within the minds of some of the settlers at Degania. The moshav was thought to be more capable of absorbing higher numbers of immigrants and therefore contributing more to the settlement of Jews in Palestine. The insular nature and small population size of Degania did nothing to dispel these notions.



The kibbutz was viewed as a settlement designed only for, “a handful of idealists” (Near 1985; 186) that could make only a minor contribution to the settlement of Jewish immigrants across Palestine.

Many in the Zionist movement therefore decided that it was vital for the long term interest of the Jewish community to construct moshavim. In 1921 a group of Degania’s members, including some of the original Romni group, left Degania to found the first moshav, Nahalal. Shortly thereafter the second moshav, Kfar Yehezeke’el was founded, and six more moshavim were founded by the end of 1923. From Degania alone, between sixty and sixty-five individuals left to join the emerging moshavim. A major factor contributing to the migration away from Degania and to the moshavim was the precarious economic situation faced by Degania. For over ten years, the core group of settlers there had suffered severe financial problems, and were often not able to sustain economic profits from year to year. Hence, many individuals, lured by the promise of a more economically stable life, migrated to the moshavim and away from Degania. The moshavim attracted many kibbutz members who preferred a more individualist and family-centered way of life (Near 1992; 95). The individuals that migrated to the moshavim harbored strong individualist tendencies and a deep suspicion of communal encroachment on domestic freedom and individualism, and many were unwilling to sacrifice family ties and individual freedom for a way of life that was by no means economically stable at this point (Weintraub et al. 1969; 125). Shmuel Dyan, one of Nahalal’s founders remarked on this issue, “Nahalal is naturally built on the basis of the family...its roots are the lives of its families” (Weintraub et al. 1969; 126). In the rhetoric of individual families, a rejection of the communal life of the kibbutz is clear.

The basic unit of production and consumption in the moshav would be the individual family rather than the collective community.

By 1921 the bifurcation of the original population of settlers at Degania was underway. As the above paragraph alludes to, the main reason many settlers left Degania was because of market pressures. Many individuals were unwilling to subject themselves to a way of life that required them to sacrifice much of their individual freedom for an uncertain economic reward. Hence, the idea of the moshav acted as a basin of attraction as it crystalized within some members of Degania. The idea of the moshav attracted those individuals who preferred a way of life with gave greater freedom to the individual to act in a comparatively more self-regarding manner. Individuals in the moshavim would not be subject to a completely egalitarian and autarkic life. Rather, the center of life in the moshav would be the individual and the family. Hence, when Nahalal was finally founded, it was precisely those individuals in Degania who were more self-regarding that left to join the moshav, while the pro-social individuals, those who considered themselves a pioneering elite, stayed in Degania.

The kibbutzim and moshavim thus acted as basins of attraction, instilling pro-social or self-regarding ethics into their respective populations. Because pro-social types remained in Degania, future kibbutzim would be based on the communal nature of that institution, reinforcing the institutional ability of kibbutzim to mold a population of altruists. The feedback effects which served to reinforce institutional differences between the kibbutzim and moshavim also ensured that both settlements would continue to diverge from each other. While the moshav sprang from the initial population of Degania, pro-social and self-regarding types would never mingle within the same population again. The institutional foundations

of the respective settlements were now set. The institution of the kibbutz was now such that all aspects of social, domestic, and economic life both in terms of consumption and production were communally organized. No member worked individually for his own benefit, and the ownership of private property was abolished. In the moshav, by contrast, more latitude was given to the individual, communal life was much less intense, economic differentiation among individuals was considerable, and private property was allowed, granting markets easy penetration into all aspects of life in the moshav (Ben David 1964; Baldwin 1972). It was this penetration of market forces that would reinforce self-regarding behavior in the moshavim, while the kibbutzim's isolation for those same forces encouraged the evolution of pro-social behavior.

#### Markets and Comparative Institutional Advantages

Market integration was the cause of the initial split among the pro-social pioneers of the kibbutz and the self-regarding individuals of the moshav. It was also responsible for generating the different institutional advantages each settlement had in producing different public goods. The greater levels of market integration in the moshavim influenced the ability of the moshavim to contribute to the economic development of the Jewish community. The lack of market integration in the kibbutzim contributed to the ability of those settlements to provide military security. This section will examine how these comparative institutional advantages arose by studying patterns of social behavior within the kibbutzim and moshavim.

The production of consumer goods necessary for economic growth and development in the moshavim occurred due to the uncoordinated and decentralized actions of self-regarding moshavniks. Because more latitude was given to the individual in the moshav, private property was allowed, and individuals worked

their farms primarily for the benefit of their immediate families while marketing the surplus cooperatively. Thus, moshavim were more tightly integrated into the external Jewish capitalist economy than were the kibbutzim. The greater reliance on external markets ensured that the decisions about farm production were the responsibility of the moshav farmer and that, "he must be prepared to risk the consequences of his actions" (Abarbanel 1974; 143). In the moshav, responsibility for economic production rested with the individual.

Since the individual was responsible for production decisions, there naturally developed a greater disparity in income between members in the moshavim as those with access to larger stocks of capital, more fertile land, and other factors combined to give some moshavniks greater returns to their labor than others. Unlike in the kibbutzim where autarky and communal equality was maintained, conspicuous consumption of all types from larger villas to private cars became widespread in the moshavim (Weintraub et al. 1969). In fact, in Nahalal, self-labor alone was considered insufficient for a desired standard of living among its residents. The life of a typical Nahalal resident was not "simple, frugal, and unostentatious" (ibid; 143-44), and this criticism applied equally to other moshavim (Near 1992). Wealth inequality among moshav members grew, hampering their ability to engage in collective or cooperative joint ventures (Abarbanel 1974).

The inability of the moshav to provide joint goods is most easily shown in the context of mutual aid between moshav members. While the provision of mutual aid between members was a foundation of the institutional structure of both the kibbutzim and moshavim, over time the institutional provision of mutual aid decayed in the moshavim. While the institutional provision of mutual aid was formalized in the early days of the moshavim, it, "broke down because of disputes,

and has never been resumed” (Abarbanel 1974; 172). The disputes that arose between members often formed between economically differentiated individuals. Moshav members with sufficient resources became reluctant to assist other moshav members who had fallen ill and were unable to work their fields. Wealthier moshav members became reluctant to help disadvantaged members because it meant more work on their part (ibid). Because the joint provision of mutual aid between members collapsed in the moshavim, farmers who fell ill were subject to severe economic hardship. “If a farmer knows in advance that he must enter the hospital...he must make his own arrangements beforehand and cannot expect anyone outside his family to assist him with the bulk of the farm work...The farmer must rely simply on hiring a worker if he does not have the labor resources within his family from his wife and children, or he must let the farm run down” (Abarbanel 1974; 173).

Cooperation between kibbutz members was much higher. The provision of mutual aid among members in the kibbutzim was completely institutionalized and the kibbutz enforced this provision of mutual aid through binding decisions agreed upon by a majority of members. If kibbutz members working in the apple orchard fell ill, or more labor was required to harvest another crop, the kibbutz could ask any member who had already worked a full day to put in another hour or two in a sector where additional labor was needed (Criden and Gelb 1976). The provision of mutual aid was especially important given the communal nature of the kibbutz. Since large scale shirking of duties directly influenced the economic standing of the kibbutz and its members, maintaining cooperation was a necessity if the community was to persist. Maintaining cooperation in the kibbutzim was possible because kibbutz members were separated from market mechanisms as the quote from the

top of this chapter demonstrates. Kibbutz members were not motivated by material rewards, rather they were motivated by feeling that they were contributing to the well being of their community and the welfare of other kibbutz members. The next section examines how the kibbutzim were able to maintain this high level of cooperation while the moshavim were unable. The critical difference had to do with methods of monitoring and sanctioning as expressed in the formal model laid out in Chapter 3.

#### Monitoring and Sanctioning in the Kibbutzim and Moshavim

As laid out in the evolutionary model in Chapter 3 the ability of a group to instill cooperative behavior in its population is dependent upon the ability of cooperative members to receive higher rewards, and thus higher average fitness, than defectors. One possible mechanism through which cooperators can receive higher levels of fitness is for cooperators to forbid defectors from receiving any benefit of jointly produced goods. By refusing to interact with individuals who have previously defected, cooperators can punish defectors, maintain higher long run average fitness, and continue establishing cooperative norms within the larger population. There is empirical evidence to demonstrate that the ability of the kibbutz to monitor and sanction the behavior of its members was much higher than that of the moshavim and also that the monitoring and sanctioning ability of the kibbutz led directly to higher levels of cooperative behavior among kibbutz members than among individuals in the moshavim (Near 1992; Abarbanel 1974; Baldwin 1972; Criden and Gelb 1976; Maron 1993).

Because the production of joint goods by definition requires cooperation among individuals, defection by agents is problematic. Different systems of social control developed within the kibbutzim and moshavim which made the monitoring

and sanctioning of uncooperative agents easier or more difficult. Further, the endogenous development of these monitoring and sanctioning regimes is directly traceable to market mechanisms. The kibbutzim developed extensive systems of monitoring and control based on social ostracism. The moshavim were unable to develop an extensive monitoring capacity and resorted to punishing deviant moshav members through economic sanctions such as fines. Social control based on social ostracism and public opinion succeeded in inducing members to provide joint goods in the kibbutzim, but social control based on economic punishments in the moshavim failed to sustain cooperation among moshav members.

The ability of the kibbutz to monitor and sanction the behavior of its members was extensive (Near 1992; Weintraub et al. 1969; Schwartz 1954). In the kibbutz, members worked in the presence of others, ate all meals in a communal dining room, shared washing and shower facilities, and were housed in a manner that minimized privacy (Schwartz 1954; Shapiro 1976; Near 1992). The communal nature of the kibbutz maximized the settlement's ability to monitor the behavior of its members by reducing the personal privacy of any individual. Through communal living, the kibbutz decentralized its monitoring capacity. Members were expected to police the behavior of other members. By decentralizing the monitoring of individuals in this way, the kibbutz also reduced the cost of such monitoring. Because individuals within the kibbutzim were constantly monitored in all aspects of their daily lives, monitoring became less costly. The kibbutz lacked any centralized institution or committee that was responsible for overseeing the social behavior of its members (Schwartz 1954). Rather, kibbutz members themselves internalized the monitoring capacity of the kibbutz and therefore acted as if all aspects of their behavior were being watched. Through the internalization of the

group's monitoring capacity kibbutz members began to self-police their own actions (Shapiro 1976). A statement by the Israeli novelist Amos Oz describes the process by which kibbutzniks internalized the monitoring capacity of the settlement group: Everyone here judges, everyone is judged, and no weakness can succeed for long in escaping judgement. There are no secret corners. You are being judged every minute of your life. That is why each and everyone of us is forced to wage war against his nature. To purify himself. We polish each other as a river polishes its pebbles - Amos Oz, quoted in Hechter (1990).

Kibbutz members perceived that the monitoring and judging of their behavior extended even to the most intimate aspects of a kibbutz member's life. Because of the communal living quarters married couples often shared rooms with unrelated individuals (Near1992). Even in situations where individuals expect a certain degree of privacy, the nature of the kibbutz did not allow it. The quote below is from the official journal of the Kibbutz Me'uhad organization and was published with the title "The Third One" in 1934. In the quote, a female kibbutznik explains that she has been married for six years and has one child. For the past two years, another woman had been living in her and her husband's room, separated from them only by a fabric curtain. Her words demonstrate the depth to which kibbutz members felt every aspect of their life to be under the watchful gaze of their fellow members. "I have not become used to it, and I never shall...The sight of the curtain constantly reminds me that there is a witness to my spiritual life; for I still cannot distinguish between the life of the body and the spirit...I live in perpetual anxiety, my heart shrinks within me...Sometimes, when I come to his bed late at night, he embraces me, and I lay my head on his chest and relax. I am at peace.



I lie still, frozen, unmoving; perhaps I need no more. I am full of dread that she may wake up. If she does I have lost a whole world” (Near 1992; 185-186).

The ability of the kibbutz to monitor the behavior of its members allowed for the development of an effective system of punishment: social ostracism. Because the kibbutz’s ability to monitor the behavior of its members was so extensive, perfect information, instantaneously transmitted by constant interaction among members, permitted the potential sanctioners, other kibbutz members, to quickly learn of the deviant behavior and to react immediately (Shapiro 1976). As expected by the model developed in Chapter 3, social ostracism became a very effective means of weeding out defectors. For instance, a member of Degania in 1914 was plowing and seeding crops. After every row he plowed, he stopped and smoked a cigarette. His fellow workers took notice of his constant breaks and no one spoke to that member the rest of the day and every other kibbutz member avoided him at dinner. The young man understood the message and promptly left the kibbutz the following day (Near 1992). A member of kibbutz Kfar Blum expressed the punishment meted out by the kibbutz in similar terms. “Our chief weapon is public opinion. A person who does not pull his weight is usually looked down upon, even though people may not express it in so many words. He will not be given a position of responsibility. No one will listen to his opinions and he will never become a real “insider” on the kibbutz. We will be polite to him because he is a member of our community, but we will not be overtly friendly<sup>3</sup>” (Criden and Gelb 1976).

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<sup>3</sup>Although this work was published in 1976, Criden and Gelb were two founding members of kibbutz Kfar Blum which was founded in 1943. The discussions presented in this work are transcribed from recorded interviews of these two founders of the kibbutz. The social aspects of the kibbutz, as reported by the authors, remained unchanged from the 1940s to the 1970s (Near 1992b).

Another example demonstrates that social ostracism was the preferred method of sanction in the kibbutz. In Degania, the wife of one member was given a tea kettle by her relatives who lived in Tel Aviv. The kettle represented a substantial threat to the social fabric of the kibbutz (Schwartz 1954), as it drew upon the limited supply of electricity and encouraged private gatherings at the expense of communal dinners at the dining hall. Rather than referring the matter to the kibbutz's General Assembly, social pressure and ostracism was employed against the young woman (Shapiro 1976). Even the woman's husband refused to let their children enter the family's living quarters during tea time. The same situation played out in a different kibbutz where a young man was given another tea kettle. Social pressure was levied against this person too, and he ended up giving the tea kettle to the children's quarters. He turned over the kettle lest his life in the kibbutz be made intolerable by the antagonism of public opinion (Schwartz 1954).

Social sanction was an effective method of punishment in the kibbutzim because kibbutz members were directly dependent on the other members of their community for their own individual well being (Weintraub et al 1969). Kibbutz members were aware that they could realize economic success only if their fellow settlers put forth significant effort. One kibbutz member stated: One problem of our work on the kibbutz is that no one sees direct results from his efforts, but only collective results. If I plow a stretch of land, it does not mean that the fruit will be all my doing, because the harvest will depend upon many other workers who will follow me. All I do is drive a tractor. There are so many other people involved before my own plowing is translated into the food I eat, the clothes I wear, and the housing I get, that sometimes the direct connection between productivity and satisfaction is lost (Criden and Gelb 1976; 62). ) To guard against free riders,

kibbutzim developed institutions of sanction resting on social ostracism which were effective in enforcing cooperative behavior within the settlements. These methods of sanction allowed cooperators to achieve higher average payoffs while ostracizing defectors, ensuring they did not receive any benefits from their interactions with more cooperative members. While social ostracism worked as an effective means of punishment in the kibbutz, the moshavim developed a different method of sanction.

Within the moshavim, social sanction was not used as a system of punishment. This was due primarily to the inability of the moshav to monitor the behavior of its members. Because individuals were more isolated from each other by virtue of living in separate houses, and also the lack of an intense communal way of life, less information was distributed about the behavior of individual moshav members. In the moshav, work was often conducted alone or in the presence of family members and occasionally in the presence of hired labor. Meals were generally consumed in the family's house, and other activities practiced communally in the kibbutz like showering and child rearing were done by moshav members in the privacy of their homes (Schwartz 1954). Because greater levels of personal privacy reduced the spread of public information regarding the behavior of members, social ostracism was ineffective in controlling the behavior of individual moshav settlers. Near self-sufficiency in economic affairs for individual moshav members made it difficult for the community to exert control over members through public opinion (Schwartz 1954). As long as the moshav member maintained an economically solvent farm, he could essentially do as he pleased in terms of his affairs with the community. The inability of the moshav to control the behavior of its members is traceable to the economic structure of the moshav itself.

Because moshavim were more integrated into external markets, the preferred method of sanction in the moshavim relied on negatively impacting the individual moshav member's pocketbook through economic fines (Schwartz 1954).

Rather than decentralized and communal methods of sanction, the moshavim relied on centralized committees to dispense punishment to members who offended the norms of moshav life. The moshav executive and judicial committees served to dispense punishment to moshav members rather than enforcing ostracism through the force of public opinion (Schwartz 1954). The judicial committee consisted of a panel of seven members elected annually by the general assembly of the moshav for the purpose of dealing with disputes between members (Schwartz 1954). No comparable institution existed in the kibbutz. Centralized systems of punishment arose in the moshav because the economic nature of the moshav gave greater freedom to the individual at the expense of the community (Shapiro 1976). Because moshav members could not ensure that their neighbors would cooperate in mutual endeavors beyond the period when such cooperation stopped being profitable to at least one of the parties (Abarbanel 1974), some moshav members proposed creating centralized institutions of punishment to adjudicate disputes between members.

Because moshavim suffered collective action problems and did not foster cooperation among members, these centralized systems of sanction either were never implemented, or if they were, they quickly decayed because no moshav member actually accepted the sanctions these institutions attempted to apply. Because the individual was sovereign in the moshav, acceptance of punishment by the moshav's judicial or executive committees was completely voluntary (Schwartz 1954; Weintraub et al. 1969). Though individuals occasionally accepted the fines levied by the moshavim, there were no legal mechanisms through which moshavim could

force members to alter their behavior. Since each family was a separate economic unit, the moshav was only threatened by the economic collapse of individual farms. Since its economic status was not harmed as long as families remained economically solvent, there was little the moshav could do to individuals who violated community norms since the violation of such norms did not directly threaten the economic security of the community. In general, moshav members felt that while violations of community norms were deplorable, there was little that could be done to stop them. When several moshav youths stole melons reserved for a prominent member's daughter's wedding, no punishment was handed down. Moshav members felt that such action was against community norms, but in the words of one member, "if you scold those fellows, they laugh at you" (Schwartz 1954; 490). The voluntary acceptance of sanction failed to alter the behavior of those who behaved extremely selfishly, and over time, because punishment was seen as generally ineffective, sanctioning institutions within the moshavim decayed and ceased to function (Schwartz 1954). Instead, outside police forces were often called upon to settle disputes between members (Shapiro 1976; Baldwin 1972).

The capacities of the kibbutzim and moshavim to develop and maintain effective methods of social sanction were attributable to the economic structures of the two different communities. Because kibbutz members were dependent on their communities to provide them with material needs, the kibbutzim developed extensive monitoring and sanctioning capacities which served to isolate self-regarding individuals from the kibbutzim and ensure greater long-run rewards to pro-social individuals. This allowed the kibbutzim to be effective providers of jointly produced public goods like military security. Because the moshavim gave freer reign to the individual, they were unable to develop extensive monitoring

networks, and because acceptance of moshav authority was voluntary, punishments were generally ineffective in altering individual behavior. These systems of monitoring and punishment further served to reinforce the institutional advantages of each particular type of settlement. Social sanction served to provide pro-social kibbutz members with higher long run fitness relative to the more self-regarding individuals comprising the moshavim. The lack of effective social sanctions in the moshavim ensured that moshav settlers would not be deterred from following their own economic self-interest, endowing the moshavim with a comparative advantage in providing for Jewish economic development.

#### Strategic Settlement: Kibbutzim, Military Defense, and Governance

If the temporal and spatial variation in settlement of kibbutzim and moshavim was a strategic plan set up by the JNF and JA to provide the Jewish community with economic prosperity during peace time and security during periods of conflict, it is necessary to understand why these proto-state institutions knew regarding the abilities of these settlements to provide these various public goods. This section investigates the extent to which the JNF and JA were aware of the comparative institutional advantages of these particular settlements, and to what extent they were aware of the social evolutionary forces of capitalism.

As demonstrated by both Table and Figure 4.1 in the previous chapter, the moshav was the preferred settlement of the Jewish National Fund and Jewish Agency from 1920 to 1935. Because the Jewish community enjoyed a period of relative peace during these years, security was discounted in favor of providing economic development. Consequently, the relative founding of kibbutzim fell in relation to the moshavim. Archival documents demonstrate that the Jewish Agency was not concerned with providing security to the Jewish community during this

period. The JA believed that the British mandatory forces would guarantee the physical security of the Jewish community, leaving the JNF and JA free to concentrate on developing the Jewish economy. A declassified security document dated January 23, 1933 demonstrates how unconcerned the Jewish Agency was with developing a Jewish military or security force. Between 1923 and 1934, Jewish defense was conceived purely as a local matter. Each settlement would post its own guards (Near 1992), but nationally the British were responsible for providing military and police forces to guard the Jewish community (Central Zionist Archives File S24). British forces, including police, would provide local security through regular patrols, and by distributing small quantities of rifles and ammunition to settlements. No settlement was to receive more than 15 rifles or 750 bullets. Clearly, sustained conflict was not considered by the Jewish Agency or the British to be much of a threat. The arms distributed to kibbutzim and moshavim were insufficient for holding out against prolonged attacks (ibid).

Most revealing<sup>4</sup> is another document bearing the name of Joshua Gordon, head of the security department of the Jewish Agency. This document is marked “strictly secret” and is titled “A Typical Defense Scheme for a Colony”. At the head of the document are the words “Nahalal taken as type”. Nahalal, a moshav, was selected as the type of settlement to be constructed for defense purposes. Nahalal, and other settlements that were supposed to be constructed like it, were to contain an armory given by British forces and stocked with a limited number of both automatic weapons and ammunition. The document clearly states Nahalal and other settlements were to act as watchtowers for the settlements that surrounded them.

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<sup>4</sup>all analysis in this section is based on (Central Zionist Archives File S24)

Flares were to be lit if any one settlement was attacked, and security details from surrounding settlements would come to the attacked settlement's aid.

Other documents marked with the signature and stamp of Joshua Gordon detail plans for guaranteeing the security of Jewish colonies. These documents clearly demonstrate that a national Jewish security plan was not being considered by the Jewish Agency. Instead, the JA was relying on the British forces to provide for the physical security of the Jewish community. A document drafted by Joshua Gordon testifies to Jewish reliance on British military strength.

The only great danger is that of a general riot...In that case no buffer settlements will afford any serious protection. The only question is how effectively the Government will deal with a general uprising. The command will then not be in the hands of a local force, but of the Air Force. The question in how far a native force will be relied upon by the military authorities to hold responsibilities is a general one. It is a general political problem which concerns the whole Jewish community of Palestine...It is to be assumed that under all circumstances British capital will get more reliable protection than Jewish villages...Of course there is yet to be considered the serious danger of terroristic acts. The means of general protection as buffer settlements (*sic.*) reliable defense force are no remedy against this kind of danger. The only preventative measures that can be taken are well organized internal watchmen, a good local intelligence service, continuous searchlights working in a lighthouse way. As additional protection in times of general excitement an electrifiable fence round the most important buildings would be recommendable.

Defense was still conceived as a function of the British mandatory forces, not something the Jews would have to provide for themselves. Within this same document, the security situation of Beit Alpha, a kibbutz, is discussed. "Beit Alpha is considered in all reports to be in a dangerous position and requiring therefore



special defense schemes. This is why, for instance, a police station of a fortress type is constructed there.”

The development of Jewish security underwent a wholesale revision after the Arab Riots from 1936-39. A final document bearing the name of Joshua Gordon states,

The provisions for the close defense of Jewish settlements formulated in 1929 were drawn up mainly with a view to the possibilities of concentrated attacks on a single settlement or group of settlements. In the disturbances of 1936 guerrilla methods are being used...The old defense provisions would appear to be ineffective in affording protection against the new form of acts of violence...Under such circumstances it is most unfair to expect the settler to sit quietly by and see the toil of years being destroyed before his very eyes and not to move to protect it. It is an insult to his self-respect and an inducement to the agitators who can hold out to the evil-doers a good prospect of escape from punishment...The Government cannot really put a policeman behind every tree of haystack. But there is no reason why the settler himself should not be afforded the possibility to stand behind his trees and protect them when he wishes to do so...It is also realized that the events of the last five weeks have subjected the police force to severe physical strain, and the days to come will entail a further strain upon their tenacity and endurance. The necessity to guard the public means of communication, to keep order in towns, etc...keeps the police so busy that they are left without time and personnel to protect forests and groves. But this is exactly what the rioters will take advantage of while the regular forces are kept busy by demonstrations and ambush attacks, the fields and groves are left at the mercy of gangs who show the *fellaheen* (Arab peasant farmers) that they may join in the less dangerous opportunities for acts of bravado and looting. In view of this new situation which cannot be dealt with effectively by the old defense

scheme, we have the honor to submit the attached scheme which would in our opinion give a more or less satisfactory solution to the problem of defensive the Jewish settlements from the campaign of destruction launched by the terrorist bands. (a) Each settlement should be given a sufficient number of supernumerary police to guard the settlement and the work in the fields...Some of these supernumerary police should be persons especially selected as fit for this work and enlisted centrally. (b) An additional number of supernumerary police should be taken on in each settlement for service in the settlement itself. Their maintenance should be as before on the account of the settlement itself. Government should provide the arms and uniforms only. (c) These supernumeraries should replace entirely the numbers of the regular force now maintained in the settlements. (d) Besides, in column 5 are shown the number of watchmen necessary for the protection of the groves and fields of each settlement by night. They are special police recruited from each settlement for the settlement itself and armed with shotguns which are the property of the settlement."

While the above quotation does not specify the types of settlement that were to receive these extra security forces, a document signed between the national kibbutz movement and the Jewish Agency in 1941 crystalized the role that the kibbutzim were to play in the provision of Jewish military defense. In 1941 the *Palmach* was created as a small but elite fighting force of the *Haganah*, the underground Jewish army. The Palmach was to be pressed into military service to counteract the military threat posed by the Palestinian Arabs and a possible German invasion of Palestine from North Africa. In its early stage the Palmach numbered about 460 soldiers and was severely hampered by a lack of funds from the dwindling budget of the Jewish Agency (Near 1992b). After Rommel's defeat in North Africa, the German invasion threat faded, and the British authorities

returned to their tactics of repressing the Haganah and Palmach. With lack of funds, no *raison d'Être*, and the threat of British interference, the Palmach was posed to fade into obscurity by 1942. It was saved from extinction when a policy linking the Palmach to the kibbutzim was ratified in 1942 between the Palmach, the high command of the Haganah, the kibbutz movement, and the Jewish Agency.

Haganah bases had always been situated in or near kibbutzim, but the Haganah always trained and lived separately from the kibbutzim. Now the Palmach would fully integrate itself with the various kibbutzim. Palmach soldiers now divided their time between military training and work on the kibbutzim. According to the details of the agreement, each Palmach soldier devote fourteen and a half days per month to work in the kibbutzim and eight and a half days to military training. In return, the kibbutz where the soldier lived was responsible for his or her food, accommodation, clothing, and other minor expenses (Near 1992b). In order to offset the costs of maintaining a large permanently mobilized force, a large sum was needed - a sum that the Jewish Agency could not, or was unwilling to, pay. The fee was raised through a loan levied on the kibbutzim and was repaid only after the establishment of the state of Israel (ibid; 25). Hence, the kibbutzim paid for and housed their own standing army. The unique character of the Palmach owed much to the institutional nature of the kibbutz. The institutional structure of the kibbutz became integral to many social relationships in the Palmach including relationships between soldiers, and between officers and soldiers. Indeed social relations among Palmach units mirrored the social relationships between kibbutz members. Social relations in the Palmach were viewed as communal and egalitarian in all matters except the strictly military where the chain of command was absolute. Payment for all soldiers and officers were equal with no regard for rank. There was no separate

mess for officers, and no insignia of rank. The Palmach itself came to be controlled mostly by soldiers and officers drawn from the kibbutzim. Of the first recruitment group, some 850 soldiers, about half were drawn from the kibbutzim.

One Palmach soldier described his experience thusly:

Our life of work and training in the kibbutzim acclimatized us to the kibbutz, almost unconsciously. I remember myself as a young, inexperienced platoon commander in one of the kibbutzim in the Jezreel valley. I was new to my task, and my soldiers were towns people, who had to get used to life in the country, the combination of work and military training, and the special conditions of our life - or, more correctly, the lack of conditions. As usual, there were a great many difficulties which I could not solve. And here the kibbutz members came to my aid: not only the secretary and the work organizer, but many ordinary members, in the work branches, in the various committees, and in many other places. They did not see us as hired workers, or "laboring mercenaries", but as comrades, emissaries of the pioneering movement, the nucleus of an underground army. They didn't talk about it much, but we felt it in their concern, their positive attitude, their desire to booth our path, to encourage and educate us, and to influence us by their example" (Near 1992b; 27-28).

The kibbutzim provided the Palmach a base of operations, and in return the Palmach provided a source of labor for the kibbutzim. This mutually beneficial relationship did not simply work to boost the labor force of the kibbutzim, but also served to influence the military structure of the Palmach. Because of their role in housing the Palmach units, the kibbutzim increased their ability to provide security to the Jewish community.

One might comment that the presence of the Palmach in the kibbutzim is the source of the kibbutzim's comparative institutional advantage in providing military security. This, however is not correct. Recall Table 4.10 on page 101. The dependent variable in this regression is a dichotomous variable measuring only if a settlement was constructed as a Tower and Stockade settlement. Recall further that these settlements were constructed specifically to provide military security in hostile environments. The Tower and Stockade settlements were constructed from 1936-1938, three to five years *before* the arrival of the Palmach in the kibbutzim. Hence, kibbutzim were providing security well before the arrival and even the formation of the Palmach.

The fact that Palmach units were stationed within the kibbutzim, then, is evidence that the Jewish National Fund and the Jewish Agency were aware that the kibbutzim were the institution best suited to provide military defense. The plan to station Palmach units in various kibbutzim was created by the Haganah and the Jewish Agency, to which the Haganah was subservient. The plan was further adopted with the approval of the various kibbutzim and their affiliated kibbutz national movements, which were also under the aegis of the Jewish Agency. Hence, the plan to settlement Palmach units in the kibbutzim was adopted with the full approval of the Jewish Agency and other national level political institutions. That only kibbutzim were chosen to shelter Palmach units (Allon 1971) demonstrates the extent to which the Jewish Agency felt the kibbutz, rather than the moshav, was a more appropriate institution for war-fighting.

#### Alternative Explanations

It was shown in Chapter 4 that one of the main explanations for the military success of the kibbutzim, namely their socialist ideology, was an insufficient

explanation for the military success of those settlements. The section will address the inadequacy of that explanation by reference to more qualitative evidence.

The increase in immigration, especially illegal immigration, to Palestine during the late 1930s and 1940s in defiance of the British White Paper casts doubt on any ideological explanation. The kibbutzim were used during the 1940s in Palestine to absorb large numbers of new immigrants, both legal and illegal. Many of these new immigrants were refugees from Nazi Germany and came from all walks of life. The great majority of them were not ideologically committed revolutionaries, but simply Jews seeking to escape the gas chambers. Hence, it should be assumed that the propensity for pro-social behavior in this population of immigrants was normally distributed. If some of these immigrants were ideologically committed, or otherwise predisposed to cooperative behavior, while others were not, why did the kibbutzim display such high levels of pro-social behavior in 1948? Unless every Jewish socialist migrated to kibbutzim while every Jewish capitalist migrated to moshavim, it seems relatively implausible that such cooperative and pro-social behavior could have been sustained in the absence of an institutional structure which rewarded that very behavior, thus increasing its prevalence in the kibbutz population. Further, even if it is assumed that the socialist ideology of the Jewish settlers was enough to overcome collective action problems, the question still remains as to why the moshavim, which were also built by Jewish pioneers, and contained founding principles nearly identical to those of the kibbutz, experienced difficulty in encouraging cooperation.

There is another possible alternative explanation. This explanation contends that the settlement of kibbutzim and moshavim is simply a function of immigration, and that the explosion in the growth of kibbutzim from 1936-1948 is explained by

the demand for settlers by the JNF and JA, as well as the available supply of immigrants during this period. This explanation also considers the demand for increased security to be important. As the demand for security increased, the demand for building kibbutzim increased, but the result of the kibbutzim being able to provide security is not attributable to the institutional structure of the settlement, but rather to the JNF and JA favoring immigrants who were young and of prime military stock, and deliberately settling them in the kibbutzim. Hence, it was simply the JNF and JA that provided security through a selective immigration policy.

While it is true that a glut of Jews were waiting in Europe to be settled in Israel during the 1930s through 1940s, many were simply fleeing Europe and immigrating illegally to Israel during this period to escape Hitler's army. Immigration took the form of attempting to save as many Jews as possible, not selectively immigrating the "best and brightest". Secondly, this is the period of the third and fourth aliyot, or periods of immigration into Israel. These waves of immigration brought many middle class and other more wealthy Jewish families to Israel. These individuals had more to lose by settling in kibbutzim where their property and wealth would become communal, hence these immigrants overwhelmingly preferred to settle in the new cities like Tel Aviv or the moshavim (Weintraub et al. 1969). Lastly the critique above applied to ideology applies equally well to this line of argumentation. If most of the immigrants to the kibbutzim during the late 1930s and 1940s were illegal, it must be assumed that the distribution of military talents in this population was normally distributed as well. If this is the case, it begs the question as to why so many kibbutzim were constructed during this period in particular and why they were so effective at

providing security overall. The most likely explanation is that the institutional structure of the kibbutz itself had some effect on making individuals more predisposed to cooperate once they were socialized into the kibbutz itself.

The above discussion does not discount *any* causal role for an explanation based on ideology - it simply states that such large scale collective action to provide public goods - either economic growth or military security - can be explained solely or even primarily by ideology. Recall in Chapter 4 I discussed that ideology was not an incorrect explanation for the ability of the kibbutzim and moshavim to provide public goods, the causal arrow simply ran from institutional structure to ideology rather than the other way around as is commonly portrayed in the Israeli historical literature (Near 1992, Near1992b). Where ideology can provide some explanatory power, however, is in the initial genesis of the kibbutzim and moshavim. The original founders of Degania, including the Romni group and the Sejera group, were indeed ideologically committed socialists who dreamed of creating a new society in Palestine based on socialist ideology. They created the communal structure of the kibbutz because they were guided by a particular ideology. The same can be said of those original founders of Nahalal who broke from Degania because of their ideological desire for greater personal freedom. The initial development of the moshavim and kibbutzim can be explained by the ideological motivations of their founders.

Where the ideological explanation breaks down, however, is in attempting to explain the large scale collective action that occurred within these settlements. When analyzing kibbutzim and moshavim including Degania and Nahalal years after their initial founding - institutional rules which evolved due to differences in market integration among these settlements as stated in Chapter 4 - played a much larger



role in governing social behavior and collective action. Recall that many individuals immigrated to and emigrated from Degania over the years. The same population movements occurred in other settlements as well. Hence, every kibbutz and moshav experienced an influx of pro-social and self-regarding individuals over time. The most likely explanation as to how these institutions maintained their comparative institutional advantages in the face of such immigration and emigration is by a process of institutional socialization whereby newcomers were either socialized into the proper social roles in the various settlements or ostracized and forced to leave. The model developed in Chapter 3 posited that a pro-social strategy, if played by a sufficient percentage of the population within a given institution, was evolutionarily stable against invasion by rare self-regarding individuals, and that the self-regarding strategy was likewise evolutionarily stable against invasion by rare pro-social types if played by a sufficient share of the population. The stability of these institutional equilibria help explain why the respective comparative institutional advantages of the kibbutzim and moshavim persisted over time despite constant shifts in their populations. As more people immigrated to these settlements they were socialized into the proper behavioral norms, or ostracized from the population, with ostracism occurring more frequently in the kibbutzim than in the moshavim as demonstrated above. Given the constant immigration and emigration, and the attendant variation in socialistic tendencies among those who joined or left various settlements, it is most likely that evolutionary pressures and institutional socialization contributed to the stability of these settlements' comparative institutional advantages over time rather than the ideology of settlers themselves.

## Conclusion

The Jewish community of Palestine emerged from its war of independence in 1948 as the new state of Israel. Much of the success of the military campaign can be attributed to the heroic efforts of the kibbutz settlers who faced down regular armies with tanks and heavy weapons and won. Of course the Jews were not disorganized nor did they lack sufficient arms. But even today rusted and crumbling hulls of tanks still dot the property of many kibbutzim and modern Israeli history is peppered with the stories of brave kibbutz soldiers who defended Israel with all their might. What is often lost in this narrative of heroism and bravery is the role of the moshavim, less glamorous perhaps, but no less critical to establishing a functioning state. The moshavim encouraged and led the growth of the Jewish economy from the 1920s to 1948. But their glory days were just beginning. The heroic days of the kibbutzim were now drawing to a close. With a functioning army that was now battle hardened the Israeli state could now focus on ensuring its continued economic productivity.

The concluding chapter will provide a brief overview of the rise of the moshavim and the decline of the kibbutzim from 1949 to the middle of the 1950s and further demonstrate how the new state of Israel continued the agricultural policies of the old *Yishuv* with respect to generating economic development.

## Chapter 6

### CONCLUSION

In the previous chapters, I have put forward a theory of governance and institutional evolution in what I have termed non-Weberian political orders - geopolitical areas defined by a lack of a fully functioning, territorial, sovereign, and Weberian state. Contrary to Hobbesian assumptions that dominate multiple subfields in both Comparative Politics and International Relations, I argue that stateless societies can construct political orders that provide political, economic, and social stability even though their authority may not emanate from a sovereign state. It was one goal of this project to call into question dominant assumptions regarding non-Weberian governance - assumptions that contend these areas are mere zones of anarchy characterized by a Hobbesian war of all against all. While the study of governance practices by actors like religious authorities, rebel groups, and other non-state actors are gaining traction, much of this literature still remains normative in tone and content rather than empirical. This dissertation has made some headway into cracking this normative facade. Through a combination of quantitative and qualitative analysis, this dissertation has demonstrated that non-Weberian orders are indeed capable of acting like states by providing critical public goods including, but not limited to, economic development and military security. Thus, I contend that the fundamental process of governance in stateless societies is not radically different from that in sovereign Weberian states. Non-state actors, like the Jewish community of Palestine, must contend with the same dilemmas and strategic needs as fully consolidated states.

They must, at minimum, ensure the physical security of their populations while at the same time meeting their population's economic needs. I contend that the different modes of governance in stateless societies and consolidated Weberian states is merely a difference of degree rather than a completely different type or style of governance.

To understand the development of non-Weberian governance in stateless societies it is necessary to understand the process of institutional development and change as an evolutionary outcome affected by processes of natural selection. The Jewish community of Palestine was able to provide itself with both military protection and economic development by creating two different institutions: the kibbutz and the moshav. Social, economic, and political actors in stateless societies must construct certain institutions in order to supply themselves with needed public goods like security, economic prosperity, or to manage natural resources, or to engage in any other instance of collective action. Hence it is necessary to understand how social actors come together to create these institutions in the absence of the sovereign state that normally provides the authority which undergirds these institutions. Understanding how institutions evolve from the coordinated actions of populations within stateless societies allows for an understanding of how political power is exercised through specific institutions. Analyzing how power flows from these institutions and how it affects social behavior is the first step towards understanding how individuals respond to these various loci of power and how, over time, these institutions evolve due to the response of individuals to the power exercised by these institutions. The kibbutzim were able to provide military security to the Jewish community because the absence of market forces acting upon individual behavior in the kibbutzim allowed those institutions to

develop extensive systems of social control which then allowed individual kibbutz members to coordinate on cooperative strategic interactions to produce costly joint goods, like military security. As security became more valuable to the Jewish community, the security functions of the kibbutzim, along with their attendant systems of social control, became more valuable, and hence they were founded at a greater rate than the moshavim. The moshavim developed their comparative advantages in the production of economic goods for the purposes of growing the Jewish economy because the type of social behavior prevalent in those institutions was more self-regarding. Hence economic and political power in those institutions rested with the individual rather than the community - leading the moshavim to become populated with a greater share of self-regarding individuals over time.

Dominant assumptions in academia and the policy community regarding stateless societies have done much to inhibit our knowledge of non-Weberian institutional development and governance. This project, I hope, provides a needed corrective to the notion that stateless societies are anarchic, unstable, and perpetually locked in destabilizing international and domestic conflict. People all over the world, from Pakistan to Chad, from parts of Columbia to the West Bank and Gaza Strip live under the rule of political orders that can only be described as non-Weberian. And people *do* live in these areas. Of course the outbreak of violent conflict is always a threat in these areas, but such outbreaks vary over time and by location. It is only by examining this variation and taking seriously the notion that stability might actually be possible in the absence of states, that any further understanding of non-Weberian governance can emerge in Political Science as a discipline. The myriad of possible sources of authority in such societies provides for a possibly bewildering topics of further research, and any attempt to investigate

non-Weberian order must, as its first step, determine precisely a locus of power to examine. Given the multitude of possibilities that political authority might emanate from in these societies, this first step is not easy. But, as this dissertation has shown, it is possible to systematically and empirically examine the development of non-Weberian governance.

The first task of any such analysis must be to specify a mechanism by or through which power is exercised. The second, but equally important task, is to specify a mechanism by which individuals come to obey the directives of that power. This is the process by which institutions evolve. Moshav settlers came to obey the directives of the market - chasing after their own personal rewards to produce economic goods which assisted with the development of Jewish economic markets throughout Palestine. Kibbutz settlers, on the other hand, came to obey the orders of their large community rather than seeking to maximize their own utility. Because power was exercised by the kibbutz as a singular social unit, reciprocal altruism evolved as a norm of social behavior - leading to the provision of military security. Hence market forces, mediated through the institution of the kibbutz or moshav, which was *itself* a product of those same forces, served as the selective mechanism that governed institutional evolution throughout the Jewish community of Palestine from 1920-1948. This institutional evolution provided social, economic, political, and military stability allowing the Jewish community to transition from a more or less stateless society to a fully consolidated and sovereign state in 1948. The founding of the state of Israel, however, marks a significant turning point in the settlement of both the kibbutzim and moshavim, showing what can occur as non-Weberian governance transition to consolidated states.

## The Kibbutzim and Moshavim Post 1948: Consolidation and Transition

The unprecedented construction of kibbutzim that led up to the 1948 war marked the end of an era for these settlements. At no other point in the history of either the *Yishuv* or the state of Israel would the kibbutzim enjoy a period of such vitality and importance. The Jewish community's success in 1948 marked the establishment of the state of Israel and the transition of the *Yishuv* from non-Weberian governance to a new sovereign state which, thanks to the military success of the *Haganah* and *Palmach* - which were now to become the Israel Defense Force - had a monopoly on the use of violence inside its borders. This new consolidated Weberian state wasted no time in consolidating its sovereign power. This consolidation meant that institutions which had previously played important Weberian functions, such as providing military security, were no longer needed. As it abrogated unto itself fully sovereign powers of statehood, the new state of Israel turned against the kibbutzim - stripping them of their pioneering and military roles while promoting the establishment of vast numbers of new moshavim. Now that Israel had a battle tested army, economic growth and development again became the state's number one goal. To this end, the founding of kibbutzim from 1949-1955 dwindled while the construction of moshavim simply exploded.

This historical record indicates that the kibbutzim were seen as threats to the establishment of the state's sovereign authority. The state of Israel openly turned against the kibbutzim. As one kibbutz members recalls during this time period, Prime Minister David Ben-Gurion "feared our strength, so he had to break us up. He didn't want any strong autonomous organizations, because he considered them a threat to the new state" (Simons and Ingram 2003; 603, quoting Liebllich 1981; 119). Ben-Gurion, seeking to consolidate his sovereign authority over the new state of

Israel, stripped kibbutz members of honorific titles such as pioneer and volunteer and instead bestowed these titles on civil servants (Near 1997; Simons and Ingram 2003). This rhetorical and symbolic move severed the link the kibbutzim previous had with the Weberian functions of the Jewish community while lending this same authority to the newly created state bureaucracies. The attacks of the new state on the kibbutzim were aimed at the very legitimacy of those institutions and, given the state's influence over legitimating processes, an attempt to shift the locus of sovereign legitimacy from the kibbutz to the state itself (Simons and Ingram 2003).

Consistent with this policy was a decline in the settlement of new kibbutzim and a dramatic increase in the settlement of new moshavim. With new Jewish immigrants from Europe and the Middle East flooding into Israel, the development of a strong and robust economy became the state's immediate priority. From June 1948 to the end of 1954 one hundred new kibbutzim were founded, the majority of these being founded immediately before and during the war, as opposed to two hundred and twenty-three moshavim (Near 1992b; 170). And in further demonstration of the depressed military role of the kibbutzim, sixty-four of these one hundred kibbutzim, and ninety-seven moshavim were situated in locations deemed by the military authorities to be the most vital and dangerous border areas (Ibid). While the relative percentages still tell the story that a greater percentage of kibbutzim were settled in unsecured border areas, never before had such a large number of moshavim been constructed in such areas - the decline of the military role of the kibbutz was already well underway. The state completely displaced the kibbutzim from its role of settling contested regions and responding to political violence after 1948.



Perhaps, in concluding the history of Zionist pioneering during this period, it is useful for David Ben-Gurion to say, in his own words, what he felt about the kibbutzim as he consolidated the power of the new Israeli state. I should like to speak not as prime minister, but as a pioneer...The kibbutz movement which assets the value of pioneering as never been as disappointing as it is in this respect. Where is the movement to meet the new immigrants, where is the pioneering element that will deal with immigration? Thousands of pioneers have done great deeds in their farms and their kibbutzim. What have they done for the immigrants? For the *aliya*<sup>1</sup> of their homes, their farms, their kibbutzim - yes! But what have they done for the three hundred thousand Jews? During the past two years I have been humiliated and ashamed. I speak as one of the pioneers, and I ask: "What have they done?"...There has never been such a failure; I am humiliated and ashamed. True, they share their bed and their bread with those who join their kibbutzim. But what about those who don't want to go to the kibbutzim, who want to be simple farm-workers - how are they being absorbed? What is their attitude towards them? The very values of pioneering are being called into question - and I know what pioneering used to be! (Near 1992b; 183-4)

The meaning behind Ben-Gurion's words is clear. Since even before the establishment of the state of Israel Ben-Gurion had advocated centralized control of the major organs of the Jewish state including the *Histadrut* (General Federation of Labor), *Mapai* (Ben-Gurion's political party) and the Zionist movement with the concept of *mamlachiut*. This word can be translated numbers ways, from statism, centralization, governmentalism, and so forth, and was expressed in state policy. It stressed the changes that had come over the Jewish community since the establishment of the state. National objectives like security, agricultural

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<sup>1</sup>Near (1992b; 183) notes that Ben-Gurion makes an untranslatable pun here for *aliya* means literally both immigration to Israel as well as improvement

settlements, and the absorption of new immigrants were to be carried out by national institutions including the army, agricultural and other ministries, and the Jewish Agency. Thus, many aspects of Jewish pioneering became obsolete at best and threatening at worst and were thus allocated to the civil service sector.

Ben-Gurion lays out an explicit justification for this policy in the early 1950s.

Now we have a new and most valuable sector: the civil service of the State of Israel. It stands in need of all the special characteristics required by civil servants anywhere and at any time - ability, assiduousness, and loyalty. But there are not enough. Fate has imposed on the State of Israel a heavy burden unparalleled in any other state...the threefold burden of defense, absorption of new immigrants, and settlements...Our generation will be judged by the way it carries out these tasks. What cannot be done by way of routine can be done by a pioneering impetus. Pioneering initiative and perpetual volunteering activity are demanded for each one of us, so that we may be worthy of this great year in the history of our people (Near 1992b; 185).

No longer were the kibbutzim the standard bearers for the pioneering spirit. Ben-Gurion, in one masterful stroke, had taken legitimacy away from the kibbutzim and bestowed it upon the institutions of the new sovereign Israeli state. The days of pioneering in the kibbutzim were done. The moshavim and the state were on the ascendant path while the glory days of the kibbutzim receded into the past.

#### Lessons for State Building in Stateless Societies

This dissertation has examined empirical evidence of governance in a stateless society in order to begin to dispel the outdated assumptions regarding failed, weak, and non-Weberian governance. No longer should it be simply assumed that anarchy and conflict inevitably follow weak states. Rather anarchy must be investigated as an empirical fact rather than an assumption to be banded about for convenience.

The faulty assumptions behind much literature in Comparative Politics and International Relations has done much to obscure processes of governance in non-Weberian orders and has led scholars down a possibly misguided path when analyzing both conflict and state building across much of the world. Rather than advocating military interventions followed by the importation of Western OECD style political institutions, this dissertation has proposed that a multitude of state building approaches can be considered from endogenous systems of authority, many of which may be unique to particular communities, locations, and time periods. One size state building most certainly does not fit all.

As a result of the possibility of a multitude of state building strategies, I am hesitant to propose any policy options. Each case, like the *Yishuv* should be examined on its own merits. Perhaps over the course of time as further research is collected and as events play out in real time in places like Iraq, Afghanistan, Egypt, Libya, Tunisia, and other nations, regularities may appear lending guidance to the question (which this dissertation does not address) of how to construct sovereign states from non-Weberian governance. The factors that led to Jewish success in Israel may not be present in other contexts. But despite this, I believe that this dissertation has taken an important initial step in proposing how future researchers might study the development of political order in other stateless societies. It is only by casting off previous theoretical blinders that we might come to realize that, even in the modern world where the state is often the dominant form and source of political authority, a multitude of sources of such authority often exist alongside the state - contesting, teasing, opposing, and even complementing its authority. It appears that we may yet still remain in the dark ages with competing sources of authority. Politics is nothing if not the struggle for power - and for a struggle to be

ongoing, there must always be more than one actor to compete with. While the sovereign state remains dominant, it is not the only game in town.

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