# Urban Nomads of Petra: An Alternative Interpretation of the Bedoul Bedouin's Relationship with History and Space

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#### **Abstract**

Jordan's efforts to become a stronger state in the global community have frequently conflicted with the Bedouin population's desire to continue its seminomadic and pastoral tradition. The Bedoul, who claim ancestral heritage to the ancient city of Petra, face a complex conflict with the urbanizing state. This paper offers an alternative evaluation of the relationship between the state and seminomadic communities by reexamining historical trends and the Bedoul Bedouin condition through a multi-dimensional analytic, which is inspired by the concept of the global city as defined by Saskia Sassen. By referring to this analytical lens as the "global city aesthetic," I intend to make use of the analytical method that allowed for the global city to be defined, to make room for the reality of contradictions, and finally, to be sensitive to the imagery and dynamics inspired by the concept of the global city. Furthermore, I hope to demonstrate the ability of this alternative approach to transcend the limitations of historiographical approaches that emphasize divergent over synthetic trends, and thereby to reevaluate conflicts to create space for reconciliation. This analytical method also transcends the temporal hierarchy that overvalues the present and devalues the past by considering historical realities in an assessment of contemporary conditions. application to the issue of desertification illustrates the analytic's versatility and relevance to a variety of issues.

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## 1. Introduction

Directly translated as "desert dweller," the term "Bedouin" describes an individual who practices pastoral nomadism in the semi-arid terrain of the Middle East. Historically, the Bedouins comprised the majority of the region's population; however, due to urbanization and development of the Jordanian state, an increase in large-scale agricultural activity and changing cultural and economic norms, there are currently very few communities that identify as semi-nomadic. Although government attempts to impose sedentism have been much more respectful and beneficent when compared to similar programs in other countries, especially Israel (Berman-Kishony, 2008), the cultural and societal losses and the destructive potential of this forced transition cannot be ignored.

The situation of the Bedoul Bedouins is much more complex than that of other tribes. Claiming to be the descendents of the Nabataeans, they inhabited the ruins and remains of the ancient Nabataean city of Petra until it was listed as a World Heritage Site in 1985. To preserve the archeological site and because historical inquiries have proved the Bedouin's ancestral claims to be false, Jordan, with the help of UNESCO, forcibly resettled the Bedoul to the nearby village of Um Sayhun (University of Arkansas, 2010; Ronay, 2002). Due to overpopulation, inadequate resources, and a desire to reclaim cultural identity, the Bedoul have slowly started to return to Petra in violation of governmental ordinances (Ma'ayeh, 2010).

The Bedoul\_understand themselves as "urban nomads:" as both nomadic Bedouins and Petra-dwelling urbanites. Although this position is not problematic for them, it seems paradoxical by definition. In reaction, one might dismiss their romanticized cultural history and claims of ancestry as a result of historical ignorance, yet the strength of Bedouin attachment to the space is so strong that the danger of this solution poses an immediate and urgent threat of cultural destruction.

By reexamining the Bedoul Bedouin condition with a multi-dimensional approach that is inspired by and based upon the concept of the global city, I hope to challenge perspectives that characterize the relationship between the state and seminomadic communities as mutually exclusive. Using the proposed analytical framework, this paper explores alternative ways to understand this dichotomy in order to resolve the contradiction inherent in the Bedoul Bedouin's claim to Petra. I argue that much of the problem arises from a temporal hierarchy that overvalues the present and devalues the past. The proposed analytical framework, known as the "global city aesthetic," seeks to revalue the past by reconsidering the effect of history on contemporary realities. This revaluation will involve a redefinition of the categories "sedentary" and "nomadic" by reconsidering their historical meanings as well as a reconsideration of the Bedouin identity, taking into account Petra's urban legacy. Firstly, I will clearly define the direct effect of temporal hierarchies on the Bedoul and identify how this complicates or obscures their relationship to the state. Then, I will define the global city aesthetic and its analytical utility and then apply the analytical framework to redefine the historical perception of Petra and the categories

<sup>&</sup>lt;sup>1</sup> The Nabataeans (previously nomadic tribe) founded Petra about 2000 years ago. They developed into a strong, sedentary empire known for their economic success in frankincense trade and fine pottery. Petra was their main urban center.

of sedentism and nomadism. Finally, I will return to the Bedoul with these historical reevaluations to resolve the contradiction created by their position as "urban nomads." Finally, the appendix offers a more specific application of the global city aesthetic to contemporary struggles with desertification in Jordan to show the analytic's flexibility and relevance to multiple issues.

This test of the global city aesthetic as an analytical lens aims to not only shed light on the Bedoul condition, but also to demonstrate the need to consider abstract and multidimensional aspects of the conflicts created by globalization. Especially in the field of sustainable development, this interdisciplinary outlook is absolutely essential because it makes room for an approach that considers all possible consequences of proposed policy, regardless of when or how these consequences are felt. Furthermore, planning for the future requires us to give value to time beyond the present. An analytical framework that equips us to transcend temporal hierarchies can enable this reevaluation. This article, specifically concerning the Bedoul, will define such an analytical framework through its application to the current conditions of the relationship between the Bedoul, Petra, and the state of Jordan. Such a demonstration hopes to not only provide an alternative perspective of these relationships but to also define a new method of analysis that can be used in other areas of sustainable development.

# 2. The Bedoul Bedouin: Refugees of History

The website of the late King Hussein observes that "Jordan is a land steeped in history," a characterization, which hints at the source of internal conflict Jordan now faces. The desire to become a strong and urbanized economic contender in the new globalization paradigm is countered by the nation's self-definition, which depends upon its rich historical past. Continuing through the text on King Hussein's website under the subtitle "Keys of a Nation," one can see how strong and central this historical national consciousness actually is:

It [Jordan] has been home to some of mankind's earliest settlements and villages, and relics of many of the world's great civilizations can still be seen today. As the crossroads of the Middle East, the lands of Jordan and Palestine have served as a strategic nexus connecting Asia, Africa and Europe. Thus, since the dawn of civilization, Jordan's geography has given it an important role to play as a conduit for trade and communications, connecting east and west, north and south. Jordan continues to play this role today... (A Living Tribute to the Legacy of King Hussein I, 2010)

Effortlessly and seamlessly, ancient Jordan is thus linked to the contemporary nation, maintaining a static and constant identity both internally and in relation to the external world. The perspective offered by the official governmental website demonstrates both a strong feeling of nostalgia for the past as well as historical foundations for national pride.

Logically, one might expect that this very same reverence extends to the Bedouin people, the remaining semi-nomadic pastoralists who, as it is generally understood, are the last to maintain the traditional lifestyle of ancient Jordan. It is

certainly true that they are celebrated. Petra is Jordan's most advertised and cherished tourist site, and the Jordanian historical discourse includes the Bedouin as their ancestors and founders even though this has been proven false. Visitors to Petra are encouraged to not only enjoy the archeological aspects of the site, but to also get a feel for the Bedouin way of life in surrounding areas. By participating in one of the visits offered by Petra Nights Tours, a tourist can "spend some time in Wadi Rum, Dana, Wadi Arava, where some of them [Bedouin] still live the traditional way... ride a camel, hike with a Bedouin guide or spend a night camping with a Bedouin meal" ("Jordan Special Interest Tours," 2010).

In this way, the Bedouin are simultaneously admired and relegated to part of the archeological exhibit. Like the ruins of Petra, they are historical remnants and are not considered as participants in the modern world. Rather than considering the Bedouin as part of the contemporary Jordanian population, the tourist industry considers them a nostalgic demonstration of history.

The Bedouin make up a very small proportion of the contemporary Jordanian population: according to the U.S. Department of State, 70% of the Jordanian population is urban, and less than 6% remain nomadic. Despite the small size of the nomadic population, however, Jordan's developmental goals seem to be in urgent conflict with the Bedouin way of life. Nomadism is established as a contradiction to urban development; historically, there have always been tensions between the two lifestyles in which the sedentary state seeks to control the mobile pastoralists (Shoup, 1984). Consequently, as Jordan has developed stronger urban centers and more modern infrastructure, Bedouins have been marginalized (Burnett, 1999) (Bocco, 1994). Most obviously, as borders, highways, and conscious spatial reordering occurred throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries, these boundaries obstructed traditional pastoral travel patterns and fragmented available land. This also forced the Bedouins to give up rotating cereal cultivation in favor of fruit and vegetable gardens: a combination of this land fragmentation and new ownership policy as well as Jordan's development of mining economies are blamed for the involuntary shift from semi-nomadic pastoralism to sedentary agriculture (Khairy, 1984).

Along with these indirect pressures, Jordan has implemented programs to explicitly encourage sedentarization (Berman-Kishony, 2008). Such programs are generally understood to be inspired by the perception of the traditional Bedouin as a threat to the general appearance of Jordan's development. Generally, nomadic pastoralism is perceived as incongruent with modern development (Walls, 1980); however, it is also plausible that in the current political context characterizing the Middle East, Jordan is especially averse to the image created by mobile communities because of their similarities to refugee populations. Ostensibly, both are temporary, transitional human settlements that have no designated place in the organization of the nation and, as living evidence of policy failures and conflict, can affect the nation's international relationships as well. (Zolberg, 2006). Therefore, it is highly likely that Jordan's policy approach to the Bedouin is informed by such fear and disapproval of the international communities towards the refugee.

Perhaps in response to this international attitude, or to make the transition to sedentarism more appealing and thus reduce conflict, Jordan has also created programs to bring the benefits of urbanity to Bedouin communities, providing greater access to education, healthcare centers, and even computers (Trombly, 200).

As a result, Bedouins have become increasingly reliant on the state for their health and well-being. According to typical discourse and conversation concerning distributive justice, Jordan's imposed urban resources are generally understood as necessary to ensure that development does not marginalize sections of the population, for with greater development comes greater responsibility to ensure that all have access to basic needs (Walls, 1980).

This method of imposing change has allowed the government to characterize the transition from a nomadic to a sedentary lifestyle as a responsible and beneficial change, even one that is welcomed by the Bedouins themselves (Madeley, 1986). Misrepresenting Bedouin attitudes, Jordan describes forced sedentarization as a positive and welcomed policy. To enhance this positive portrayal, Jordan also seeks to establish the traditional Bedouin lifestyle as backwards and therefore, incompatible with modern society. Logically, an outdated mode of living should be abandoned in order to achieve a higher quality of life.

Similarly, the website of the Jordanian Embassy, which is directed at an American audience with western developmental ideals, characterizes these changes as beneficial and well-received:

"The Bedoul Bedouin today are in transition from a pastoral existence where most of them lived in the rooms they call 'caves' carved by the Nabataeans two thousand years ago," Ronay stated. They farmed in very small plots of land and herded their livestock.. Today, she adds, these Bedouins are "adjusting to 'modern' life which now includes running water, electricity, mass media and cell phones as well as a greatly expanded diet and better health care in their village of Um Sayhun initially built by the Jordanian government for this tribe. (Embassy of Jordan (Washington, D.C.))

From this description, sedentarization is defined as a form of aid and as a beneficial change for the community.

Unfortunately, these benefits also have consequences. While increased education and health care is of course beneficial to any community, such introductions to the Bedouin are accompanied by decreased access to traditional sources of food, namely milk and meat, which depend on a pastoral nomadic lifestyle. This decreased access has been shown to be harmful to the health of Bedouin children. In his study of the nutrition and health of Bedouin preschool children, Ibrahim M.D. Khatib and Ibrahim Elmadfa concluded that the lack of access to milk and meat has forced urbanized Bedouin to rely on powdered milk, creating lactose-intolerance and calcium deficiency in the population's youth. Furthermore, he found that urbanization indirectly requires Bedouin to spend money on other household goods besides food, such as appliances, toys, and entertainment products, if they intend to participate in sedentary lifestyle and culture. These expenditures limit their ability to afford the fresh produce from which urban communities benefit. Consequently, the sedentary Bedouin communities increasingly experience health problems arising from malnutrition and vitamin deficiency. Khatib and Elmadfa predict that this situation will only worsen with further urbanization. As illness and poor health deteriorates, Bedouins increasingly rely on urban institutions to provide access to healthcare, yet with this increased participation in sedentary consumptive practice, health and well-being continues to decline. Although increased healthcare seems beneficial, the resulting sedentarization is actually quite destructive.

In effect, the tourism industry and governmental initiatives have defined the remaining Bedouin population as a community that refuses to participate in modern society. In the eyes of the state, the Bedouin not only reject Jordan's national goals, but also refuse the positive changes globalization and urbanization can bring by asserting their nomadic lifestyle. They seem to be completely outside the mainstream Jordanian social and national consciousness because they do not share the same desires or values. Essentially, they are leftovers of a past historical era.

Combining both the negative connotations of a mobile lifestyle and the attitudes and approaches of the sedentary nation towards such communities, I characterize the condition of the Bedouin as "refugees of history." The space in which the Bedouin traditionally practiced pastoral nomadic lifestyles is no longer available, leaving the community stranded and estranged much like current refugees of conflicts and nations. Yet, this space is located historically rather than geographically; therefore, attempts to resolve this conflict must necessarily be of an unorthodox nature. Regarding the condition of the Bedoul, I offer the "global city aesthetic" as an alternative way of understanding Petra as both a historical and contemporary presence in hopes of overcoming the obstacle created by relegating an entire community to a past era. Using this analytical framework that reconsiders the importance of historical trends in contemporary perspectives, the Bedoul's claims to Petra can be seen as legitimate and worthy of consideration.

# 3. The Global City Aesthetic

The "global city aesthetic" is based on Saskia Sassen's definition of the global city. Noting some of the limitations of traditional approaches to understanding globalization, Sassen characterized global cities as "command points in the organization of the world economy, key locations and marketplaces for the leading industries of the current period, and major sites of production including the production of innovations for these industries." (Sassen 2006, p. 9). These cities are also characterized as "nodes" in emerging global networks and are therefore, constantly in contact with other global cities and influenced by other geographic areas. This new definition is intended to consider what was neglected in the traditional discourse surrounding globalization: that the territorialization of capital and spatial attachment of services as information technologies make physical distance irrelevant and location arbitrary. A focus on the imagery of networks and nodes resolves this contradiction by taking a multi-scalar and multidisciplinary approach. The global city includes "multiple dimensions" (Sassen 2006, p. 11) in its analysis of globalization and consequently produces alternative solutions to the most pressing issues of the contemporary world that are intensified by globalization, such as environmental destruction, growing wealth disparity, and violent conflict.

This analytical method that looks for links, networks, and the coexistence of contradicting trends is essentially what the "global city aesthetic" is intended to invoke. The image of the global city as dynamic, connected, constantly oscillating, producing and receiving, and most importantly, illuminating the simultaneous processes of spatial attachment and detachment is quite singular and unique. It thus provides a framework for an analysis that can consider both specific and general processes and trends without the hindrance of contradiction. If this image and

pattern-based approach is applied in other situations, perhaps a similar result will occur.

An analysis of the urban metropolis of Petra that includes both its historical and contemporary presence, focuses on its connectivity with other centers and other populations, and includes seemingly unrelated pastoral and agricultural transitions makes use of this global city aesthetic. Furthermore, since this alternative historical analysis intends to shed light on contemporary issues that are partially derived from Jordan's emergence as a more powerful state in a globalizing world, the global city aesthetic is relevant in that it connects Jordan's developmental trajectory to ongoing global processes. Through its application to Petra, the obstacle created by temporal hierarchies can be overcome, allowing the Bedouin lifestyle a space within the image of a modern and global community without classification as a backwards, nostalgic tradition. However, in order to apply the global city aesthetic to Petra, Petra must first be established as a global city in its own right.

## 3.1 Petra: A Global City

Due to its historical urban strength and its consistency with Sassen's definition, Petra can be considered a global city in its own context. Inhabited by the Nabataeans until about 300 AD, Petra was a major site of both frankincense and pottery production (Richard, 2003, p. 437). Strategically located on one of the major paths of the over-land frankincense trade route that connected the Arabian Peninsula with Damascus and eventually, with markets in Europe and North Africa (Smith, 2005), Petra's economic success was rapid. Combined with the agricultural and infrastructural innovations of the Nabataeans, Petra soon became a flourishing metropolis characterized by wealth and cultural fusion. (Politis, 2007). It experienced its peak in economic activity, wealth, and trade interactions under the reign of Aretas IV in the century after 100 AD. At that point in time, the Nabataeans had trade connections with the Greek empire and possibly even India.<sup>2</sup> With this position, the Nabataeans also regulated economic activity in the surrounding regions and had significant influence over a large geographic area in the realm of cultural development and intellectual exchange (Politis, 2007, p. 339). Like Sassen's global city, Petra had far reaching international influences as well as accessed and sustained multiple networks.

Most archeological and historical discourses, focusing on these very impressive characteristics, depict Petra as uniquely urban and as an anomaly in its surrounding environment with scattered, nomadic tribes (Falconner, 1995). Yet this portrayal of the ultimate "bustling metropolis" might be inaccurate. Much of our understanding of daily life in Petra comes from secondary accounts that were primarily concerned with the novelty of urbanization and economic production, which possibly colored the depiction of the city to express this preoccupation (Falconner, 1995). More importantly, the general archeological approach tends to focus on the household as the main unit of societal structure. The consequence of

<sup>&</sup>lt;sup>2</sup> This high economic activity as well the existence of far-reaching international connections is proven by both historical texts and the discovery of large amounts of coins from impressively varied origins that date from that period.

this focus is an emphasis on urban development and a de-emphasis on rural or alternative lifestyles (Falconner, 1995).

Studies that attempt to overcome these preoccupations show that Petra was, in fact, much more complex than simply a cosmopolitan and urban center with farreaching trade connections. Besides the fact that the Nabataeans had a nomadic heritage, and according to recent studies, never truly lost some of the consciousness of mobility that accompanies such a lifestyle (Levy, 1999), it is also true that much of Petra's organization and structure relied on scattered rural settlements, smaller villages, and nomadic and semi-nomadic communities (Politis, 2007).

To understand the mutual dependency between Petra and pastoral communities, it is necessary to reexamine the historical definitions of sedentarism and nomadism. Using the global city aesthetic as the mode of analysis, the next section will emphasize interdependence rather than opposition, thereby escaping the conflict created by these binary terms. After this redefinition, the Bedoul condition can be revaluated and reconsidered in a way that allows solutions to arise from the contradiction of their claims to Petra.

## 3.2 Sedentism and Nomadism in History

It is generally assumed that urbanization is a phenomenon that results from an agricultural surplus (Falconner, 2007; Berelov, 2006). As surplus accumulates and wealth grows, a movement from rural lifestyles to the urban center increases, which also increases the diversification of skills and enhances the power of the center itself. Furthermore, higher population density requires more complex land ownership plans and politicized social organization. As the diversity of economic output increases, it attracts further migration, speeding up and intensifying the urbanization process. In the specific case of Jordan, a study of general trends shows that an intensification of cereal production is accompanied by greater investment in irrigation, greater need for farming and domesticated animals, and consequently, the build up of permanent settlements around a spring or a well to maintain this high level of production. Likewise, abatement in agricultural activity traditionally suggests a decline in urbanization (Khairy, 1984).

However, there are some contradictions inherent in this simple model that complicate our understanding of the relationship between the urban and the rural, especially when considering the nature of commerce in the Middle East. First of all, the more mobile pastoral lifestyle allows for a greater flexibility of travel and consequently, a greater mobility of goods and commerce. Furthermore, mobile pastoralism created and sustained international networks that are usually associated with the urban sites (Smith, 2005; Richard, 2003). Since the commerce that allowed urban centers to develop depended on the strength of nomadic communities, this challenges the assumed correlation between sedentarization and increased commerce. Also, Jordanian agriculturalism was not necessarily a sedentary activity and therefore did not necessarily lead to permanent settlements; in fact, such a development might have harmed agricultural output. The dryland climate forced crop rotation and the constant movement to new lands; this was complemented by the grazing and herding tradition, creating a mobile agricultural economy. The

assumed evolutionary relationship between agriculture and urban settlements, then, does not apply in this case (LaBianca, 2006).

The result is an unclear relationship between agricultural and urban activities and the image of a multi-leveled sedentarism that incorporates both urban and nomadic communities: "Because sedentarism may occur on many levels of intensity which can include seasonal occupations of different durations, the material culture repertoire of sites may often conflate attributes normally associated with sedentary groups, with those normally associated with migratory groups." (Berelov, 2006, p. 137). This complex relationship and its ambiguous archeological remains defy the characterization of urbanization that focuses on agricultural development and necessitates the consideration of other possible forces to explain the transition and relationship between the two livelihoods. Just as the contradiction of simultaneous spatial attachment and increased mobility of capital was resolved to define the global city, perhaps the contradiction of simultaneous nomadism and sedentarism can be explained through a similarly multidisciplinary approach.

Ølystein S. LaBianca, in his paper "Tells, Empires, and Civilizations: Investigating Historical Landscapes in the Ancient Near East," shows how the constant oscillation between sedentarism and pastoralism can be derived from both internal and external cultural and political conditions. Internal conditions, he claims, are "little traditions," or rather "innovations by local populations that enhance their survival." Specifically, these are historically informed abilities and approaches of a community such as local-level water management, mixed agropastoralism, fluid homeland territories, residential flexibility (knowledge of different forms of shelter), hospitality, honor and shame. External conditions are also historically informed and include the pressure and influence from empires and civilizations that introduce "normative principles and behaviors propagated by literate elites that reach specific localities." In the case of Jordan, this seems to be a highly likely cause, given the frequency and diversity of foreign contact and invasion.

Considering these political and cultural conditions also has implications for the way archeological evidence is interpreted. The shift between abatement and intensification is so frequent that it further supports the idea that conditions of sedentarism and nomadism were not totalized or mutually exclusive; there must have been overlaps in the transition. This assumes a general coexistence between pastoral and urban lifestyles, challenging the conceived idea that they are opposite reactions to opposite economic conditions. In Jordan, this is supported by archaeological evidence that shows a close material relationship between sedentary centers and nomadic outposts, as well as a highly interrelated spatiality between the two types of archeological remains that previously confused or obscured the understanding of the development of civilization in the region (Politis, 2007). The relationship between the two, therefore, must have been mutually beneficial, especially since agricultural production as well as commercial trade required mobility while material production required immobility.

In this way, regarding sedentarism and nomadism through a multidisciplinary lens makes the relationships between seemingly opposite ways of life legible. Furthermore, sedentarism and nomadism are not, in this context, in opposition; in reality they work together in the same system. Therefore, rather than its typical characterization as an exception or as an impressively urban center in a non-urban

environment, Petra is better understood as a node within a system that incorporates urban and non-urban experiences across space and time..

If the cycle between sedentary and nomadic lifestyles is redefined as multilayered with many overlaps, the Jordanian government can be considered as an "external condition" that is imposing new behavioral expectations on the Bedouin. One might accept that this is simply a part of this cycle, citing the many historical transitions between nomadism and sedentarism. Adaptation to a new age should be expected of all peoples; perhaps the irrelevance of nomadism should be accepted rather than contested. However, the effect of governmental pressure, as already demonstrated, is more permanent and destructive than what LaBianca described in his study. This is not a situation in which changing political climates create an environment in which nomadic communities voluntarily settle, indirectly suppressing mobility. Rather, it is a situation in which the political power directly imposes sedentarization, destroying nomadism entirely and effectively ending the cycle.

These direct efforts of the state obviously derive from the conceived idea that sedentarism and nomadism are in opposition, which was challenged in the previous section. Despite the historical legacy of a mutually-beneficial relationship between nomadism and sedentarism, a new self-awareness of the nation's developmental status and efforts to direct development along a certain path characterize the governmental attitude towards internal affairs. Consequently, the unique relationship between mobile and sedentary communities present throughout Jordanian history is replaced by the developmental standards of the rest of the international community where nomadism is rare if not entirely absent. Therefore, attempts to destroy the cycle between nomadism and sedentarism are due in part to a change in the way the nation evaluates itself as well as an increasing internalization of the expectations of the rest of the world.

Although increased international awareness is an inevitable result of globalization that cannot and should not be limited as the global community attempts to improve the quality of life of all communities, there is no need to reject the unique internal developmental patterns that have worked consistently for more than a thousand years. Just as the Bedoul are experiencing a loss of cultural identification and feel that their traditional self-awareness is threatened, perhaps Jordan, on a national scale, is experiencing the same trauma subconsciously. It is even more urgent, therefore, to find a way to resolve the contradiction between the contemporary and traditional standards of development.

This can be achieved by integrating the two new reinterpretations made possible by the analytical framework of the global city aesthetic: Petra as a global city, and sedentarism and nomadism as mutually beneficial and dependent lifestyles. Their combination will hopefully allow a new understanding of the issue that creates a space within Jordan's conception of development for the Bedoul Bedouin to maintain the integrity of their cultural identity.

#### 4. The Bedoul as Urban Nomads

If one accepts that, due to the interdependence of sedentarism and nomadism, the Bedouin lifestyle is informed by the myth of Petra as a global city, it can be shown that, perhaps, the Bedouin existence and a developed Jordanian state are not incompatible. To demonstrate this effect, a comparison between the historical inhabitants of Petra, the Nabataeans, and the Bedoul of the present is necessary. Establishing that there is a relationship between the two groups even though it might not be biological can help us better understand the importance of Petra to Bedoul cultural identity.

Some similarities between the two groups are quite obvious: both the Nabataeans and the Bedoul arrived at Petra from nomadic backgrounds, so it is possible that the reaction towards the area was similar. Although the Nabataeans founded the city while the Bedouins did no building of their own, both used the site for shelter in similar ways: living in a combination of caves and tents around the region (Shoup, 1985). The Bedoul also experienced a similar change in lifestyle, transitioning from an agricultural and pastoral subsistence to a commercial engagement with the tourist trade, drawn by the potential for almost a doubling of daily income (Shoup, 1985). This could, perhaps, explain the spatial attachment to Petra, and it could even imply economic motives for claiming ancestral heritage.

However, applying the alternative understanding of the transition between sedentarism and nomadism as described earlier, it becomes clear that the cause of the Bedoul's shift in livelihood was not entirely due to the draw of profit; rather, there were both external and internal reasons why they settled into the sedentary lifestyle. Specifically, one can find in the "little traditions" of general Bedouin culture a discourse informed by urbanity: specifically, the strong tradition of hospitality and welcoming of the guest. In fact, the concept of the household pervades much of Bedouin culture and tradition even though this contradicts the conceived understanding of nomadic existence (Racy, 1996).

Furthermore, the Bedoul who live in Petra have capitalized on the tourist trade because of the increased amount of foreign visitors. Just as the Nabataeans inhabited Petra because of its strategic placement on the frankincense trade route, the Bedoul inevitably experience a huge amount of traffic and exposure that created a market for "exotic," cultural goods. Even though they resist the traditional lifestyle of urbanity, their attachment to Petra has connected them to a global network of cultural exchange that produces the sensation of mobility on an abstract level.

One significant difference that has grave implications for the relationship between the Bedouins and the Nabataeans is the nature of what is actually traded. Unlike the Nabataeans, whose main exports were pottery and frankincense, the goods of the Bedoul are more experiential in nature; essentially, the Bedoul sell themselves as cultural exhibits (Shrycock, 2004). As a result, the Bedouin appropriate exactly what Susan Stewart calls the "double function" of the souvenir: "to authenticate a past or otherwise remote experience, and at the same time discredit the present" (Shrycock, 1996). In essence, the Bedoul make legible and profitable another network to which Petra has given them access: the network of history.

This role of the Bedouin as symbolic or representative is further supported by their general conception as refugees, which was explored in earlier sections. Their "camp," or inhabitance of Petra, has an effect similar to the refugee camp that is both spatially and symbolically significant as well as the source for the production of urbanity. As Michel Aiger shows, "the camp creates opportunities for encounters, exchanges, and re-workings of identity among all who live there. In this sense, the humanitarian device of the camps produces cities, 'de la ville,' if one considers the city from the point of view of its essential complexity" (Aiger, 2002, p. 322). Aiger

demonstrates how the camp not only creates a community that maintains the memory and myths of its origins, but also can give meaning to what was a deserted place before. This is essentially what the presence of the Bedoul in Petra has done.

How can one escape refugee status? The gesture of accepting this characterization of the Bedouin at least partially overcomes the marginalizing effect of history by not only legitimizing the urgency of their predicament but also by characterizing the conflict as a typical byproduct of globalization processes. Hence the situation is commonly understood as a modern problem the international community is used to confronting and is thus possible to be resolved. However, as refugees, they still are defined as external to society and as an unwanted, surplus population. Essentially, the refugee status does nothing to resolve the contradiction embodied by the Bedoul: simultaneous identification as nomads and as inhabitants of an urban site. They are self-proclaimed "urban nomads."

Returning to the "global city aesthetic" and the demonstration of its effect on historical interpretation, it is clear that the Bedoul, by physically and symbolically reasserting Petra's position as a node in an international network that directs and produces an economic flow, do not resist national urbanization and development desires. By demonstrating the dynamics of globalization as defined by Saskia Sassen: "the formation of global markets, the intensifying of transnational and translocal networks, and the geographic redeployment of a growing range of economic and financial operations" (Sassen 2002, p. 380), they are engaging in the new globalization paradigm. Furthermore, the Bedoul's position in Petra gives them multi-dimensional access since they are both connected to the global community and to historical communities through their evocation of the Petra myth. In this way, they demonstrate the contradiction that required the creation of the term "global city:" a simultaneous devaluation of physical distance and valuation of physical and spatial location with the added dimension of time.

Petra therefore maintains its urbanity and international reach even after its abandonment through the mythology of its cultural image. This significance of the myth, while at first might seem contrary in a modern context informed by scientific and factual understanding of truth, is not alien to the current condition at all: "One easily supportable 'truth' is that modern society is as myth-bound and mystical as any that has preceded it" (Rees, 2002, 16). For this reason, it is reasonable to accept mythology as well as economic and political influences as what shapes the conditions and trajectories of current communities.

Urban nomadism, when examined through the "global city aesthetic," is much more compatible with Jordan's development goals than previously perceived because it locates the Bedoul within this mythology and consciousness of an urban paradigm. Urban nomadism is the lifestyle that embraces both a traditional and historical cultural practice and the contemporary standards of developed communities. Hence, the Bedoul Bedouin, in claiming attachment to Petra while maintaining identification as pastoral nomads, are in fact resolving the opposing forces of international globalization and historical and cultural nostalgia. This not only allows the Bedoul to share a common national identity with the rest of contemporary Jordan, but also allows the state to find a place in the globalized international community without compromising its cultural heritage.

## 5. Conclusion

André Wink states that the most urgent issue concerning contemporary nomadic societies is an exploration of "post-nomadism," which sweepingly encompasses "all those cultural practices and traditions that are found among pastoral nomads which became part of the sedentary world... Post-nomadism itself can only be understood as a corollary of transition that reflects the condition of a whole range of societies over many centuries which were without fixed parameters and boundaries" (Khazanov, 2007, p. 295). Yet with the forces of globalization, technological communications seem to have increased our mobility rather than emphasize the sedentary tradition. It is only recently that the terms "perpetual tourist," or "global citizen," or "third-culture kid" have become part of our vernacular. In a sense, we are becoming increasingly nomadic as we create faster communications and broader networks, and physical space becomes less relevant to our society and economy. In a way, the Bedouin are a step ahead of us; they have already embraced the abstract reality of globalization. At the very least, we can acknowledge that their predicament is not so different from our own.

Communities are no longer necessarily defined by physical location nor by cultural homogeneity. Instead, they are vague, abstract, intangible categorizations that are constantly changing, expanding, shrinking, splitting, and combining. How does one legitimize an identity based on imagined and abstract connections? The global city aesthetic is an analytical framework that provides for a multidimensional reality. By considering both fact and myth as sources of truth and accepting the direct influence of history on the conditions of the present, it creates a justifiable space for the abstract in the perception of our current world. Thus the forces that are partially responsible for shaping contemporary conditions escape evaluation and control by virtue of the unreality becoming real, recognizable, and approachable. As a reifying tool, the global city aesthetic is perhaps the lens through which we must view both others and ourselves to adjust to the constantly changing globalized environment in which we live.

# Appendix - An Application: Desertification

The benefits of the alternative analysis provided by the global city aesthetic can be further demonstrated by an application to specific issues in which tensions between urban and nomadic lifestyles are more obvious, such as the problem of desertification in Jordan. This environmental issue has long blamed pastoral agriculture and nomadic practices as its cause, but with this reanalysis, it is evident that this perspective is oversimplified and reductive, which obstructs effective solutions. Considering historical trends in a different way, a solution that allows the continuation of nomadic practices can be discovered.

Desertification is defined as "reduction or loss of biological or economic productivity of ecosystems resulting from climatic variations, land uses, and a combination of processes" (Warner, 2009, p. 9). Jordan's semi-arid and arid regions are expanding, and the threat to the available fertile land and biodiversity is palpable. In 2006, the Minister of Agriculture estimated that desertification causes a loss of about 30,000 donums of fertile land each year (Wardam 2006).

Reports from the UN and pressure from the UN Conference on Desertification has pressured Jordan to take action to contain desertification (Thomas, 1994, p. 28-36). Jordan is very cooperative, possibly partially as a result of the general conversation that associates developed countries with environmental responsibility. As previously demonstrated, much of Jordan's policy decisions could potentially be derived from an attempt to fit international conceptions and standards of development. As stated in an article from the Star Newspaper in January 2010:

The global trend towards the green economy was reiterated by the recent financial crisis which underscored the need to invest in a green economy that is based on sustainable resource management. Several countries in Europe as well as the United States have injected vast financial resources in the green sectors of the economy ... Jordan may be a small market in size, but it has adequate human resources that can, with some additional education and systematic training provide great services to the region in sectors of green economy. It is important that some of the brightest students in Jordan be encouraged to study energy, water, environment, recycling and environmentally friendly engineering and management of natural resources. (Wardam, 2010)

In this case, such a reaction to global trends can hardly be deplored. Jordan's environmental awareness has increased dramatically over the past decade. Jordan not only has made many more environmental reports accessible and public, but is also investing much more of its budget in environmental programs. In 2009, Jordan announced its investment in a 4.3 million (unit) program that would address climate change adaptation, as well as increasing investment in renewable energy (Wardam, 2010).

The government is very much aware that this is an urgent problem and is therefore, anxious to contain the problem both for the sake of the environment as well as to maintain an image of fertility and wealth sustained throughout history. Returning to King Hussein's website:

Perhaps an even greater threat to Jordanian fauna and flora is the loss of

habitat. Historically, Jordan used to be renowned for its forests and verdant vegetation. Numerous verses of the Bible refer to the "land of milk and honey," yet today Jordan's forests are much reduced in area.

(A Living Tribute to the Legacy of King Hussein I, 2010)

Similar to the historical implications of resolving the situation of the Bedouin, desertification is also an issue that engages history while maintaining relevance to larger global concerns.

Further complicating the situation is the explanation for desertification. In general, desertification is understood to be an anthropogenic phenomenon caused by overgrazing, overcultivation, and deforestation (Thomas, 1994, p. 67). In the memorandum report prepared for USAID/Amman, desertification, defined as "Range degradation, erosion and inefficient resource allocation in livestock subsector," (Richards, 1993, p.6) was directly blamed on Bedouin pastoral activity. The report also warned against potential conflict arising from policy efforts to preserve the steppe lands by enforcing and restricting land ownership. This is not surprising: since the general view is that nomadic activities have a destructive impact on sedentary agricultural endeavors (Khazanov, 2007), nomads in the general international community are a popular scapegoat beyond Jordan as well. Furthermore, UNCOD often supported and encouraged sedentarization as a potential solution.

This uncontested correlation between Bedouin practices and land degradation is once again informed by traditional historical perspectives that blame the abandonment of settlements, including Petra, on desertification, therefore oversimplifying the issue and obscuring possible solutions. While it is logical and probable that much of the motivation to abandon settlements was derived from the consequences of desertification, blaming desertification on the poor practices of the people themselves is a dangerous assumption.

Firstly, the impact of nomadic communities on sedentary civilizations is not very well studied; usually academics are more concerned with the influence of sedentary civilization on nomadic lifestyles (Khazanov, 2007). Hence, it is more of an assumption rather than a studied and proven statement that nomadic practices are threatening to sedentary subsistence and well-being. More importantly, blaming desertification entirely on nomadic activity obscures the dangers land degradation poses to the Bedouin communities themselves. Besides acting as another force that limits mobility and threatens livelihood practices, nomadic communities are especially vulnerable economically to the increase of arid lands. Since nomadic pastoralists rely directly and completely on environmental conditions for subsistence, desertification has direct negative economic impacts and can spark a poverty cycle from which the only escape is sedentarization. Increasing fodder prices (Wardam 2006) and decreased access to fertile grazing lands, for example, are financially disastrous for nomadic agriculturalism. Desertification, therefore, acts almost in accordance with sedentarization agendas of the government by limiting mobility and creating an economic climate that does not accommodate a space for nomadic pastoralism. As a result, desertification is a natural sedentarization policy. Therefore, blaming the Bedouin for desertification is reductive, manipulative, and dangerous. Challenging this general assumption, a recent study of environmental impacts on Jordan's soil shows that in fact, soil erosion was probably due to the

frequency of extreme climate events and droughts (Schmidt, 2006). The study also suggests that this historical precedence should be considered in light of the future threat of global warming, implying that such a narrow perspective has a dangerous effect on the efficiency of current policy initiatives (Schmidt, 2006). Clearly, both the issue and the solution must be redefined.

The global city aesthetic can be applied to this problem in order to escape such a narrow view. This would require a conscious awareness of the "myths" that inform motives of both parties. William E. Rees describes the modern myth of expansion as the dominant logic behind the approach to environmental problems and locates it as one of the obstacles for achieving sustainability. He calls for a new cultural myth as part of the solution, one that does not see expansion as the only end to human development. Perhaps, the combination of the myth of Petra, which includes a cycling, oscillating, and unconventional urban relationship to the land, with the modern myth, can provide the new outlook Rees proposes.

David S.G. Thomas and Nicholas J. Middleton offer a new definition of desertification that is more flexible: they reinterpret desertification as both a process of change and a descriptive state. They also define it as a "total social phenomenon, total in its potential direct and indirect effects on everyone and total in that people are involved in all its stages, not just as cause and victim" (Thomas, 1994, p. 11). Such a definition, which considers desertification as a process, not a consequence, of changing social conditions not only allows for more varied solution-based approaches but also renders the social aspect of these solutions as immediately relevant, increasing the potential for success.

A more flexible solution that might act in accordance with this definition would be an environmental policy that retains the beneficial aspects of the traditional and historical agricultural practices while adapting them to current conditions. This would require an alternative understanding of the patterns of desertification and agropastoralism throughout history that takes into consideration the duration of nomadic lifestyles. How can a system that survived for so long and through so many different eras suddenly become destructive? In fact, traditional Bedouin agropastoralism seems to actually benefit the environment. Since this was the primary mode of agriculture until recently, it is safe to assume that pastoralism shaped the current composition of the land, plant growth, and soil composition. Furthermore, studies show grazing has a positive effect on plant biodiversity and that local species have adapted to pastoral activity, while imposed methods of combating desertification, such as afforestation, have a negative effect on species diversity (Alrababah, 2007). In order to combat desertification as a direct result of agropastoralism, a more successful approach would be to encourage practices that were historically traditional. In Israel, such a proposal has already been developed in the form of a four model approach: protection from grazing, grazing rotation (which would require some sort of pastoral mobility), planting trees in eroded areas, and revegetation of degraded areas.

This cooperative approach is necessary since, as shown in Satterthwaite's article "Adapting to Climate Change in Urban Areas: The possibilities and constraints in low- and middle-income nations," a one-sided approach to sustainability projects in less developed nations are doomed to failure. "If they do not consider and engage the more vulnerable communities, resilience will not be guaranteed nor can general well-being be supported. All climate change efforts must

be multi-scalar, and must be grounded in both the national and local systems of governance" (Sattertwhaite, 2007, p. 63-65). For Jordan, this includes the Bedouin communities.

Jordan's hopes for development cannot be founded on inequality: its future must include all of its communities. The current approach is to eliminate the diversity of the community by encouraging assimilation and sedentarization; yet, as shown, this only causes conflict, poor health, and inefficient management of larger-scale issues. An alternative approach that evokes the global city aesthetic will help Jordan speed up the development process so that it can interact with other nations at the level it desires. Furthermore, it will allow the reconciliation of seemingly-disparate world views that could destroy efforts to create a sustainable and equitable future. If the government would understand that its goals are not in opposition with those of the Bedouins and that a sustainable, developed state is part of the imagination of both groups, it would be possible to implement cooperative and much more successful measures to combat environmental crises. This would allow policy makers to move beyond the ostensible contradiction between urban and Bedouin communities and focus on solutions rather than conflicts.

# **Bibliography**

- A Living Tribute to the Legacy of King Hussein I. (2010) Retrieved from <a href="http://www.kinghussein.gov.jo/">http://www.kinghussein.gov.jo/</a>>.
- Abu-Ekteish, F., Otoom S., & Shehabi I. (2009). Prevalence of asthma in Jordan: Comparison between Bedouins and urban school children using the International Study of Asthma and Allergies in Childhood phase III protocol. *Allergy and Asthma Proceedings*.
- Adeel, Z., & Safriel, U. (2008). Achieving sustainability by introducing alternative livelihoods. *Sustain Sci*, *3*, 125-33.
- Agier, M. (2002). Between War and City: Towards an Urban Anthropology of Refugee Camps. (R. Nice, & L. Wacquant, trans.). *Ethnography*, *3*(*3*), 317-341.
- Alrababah, Alhamad, Suwaileh, & Al-Gharaibeh. (2007). Biodiversity of semi-arid Mediterranean grasslands: Impact of grazing and afforestation. *Applied Vegetation Science* 10, 257-64.
- Berelov, I. (2006). Signs of sedentism and mobility in an agro-pastoral community during the Levantine Middle Bronze Age: Interpreting site function and occupation strategy at Zahrat adh-DhraÔ 1 in Jordan. *Journal of Anthropological Archaeology*, 25, 117-43.
- Berman-Kishony, T. (2008). Bedouin Urbanization Legal Policies in Israel and Jordan: Similar Goals, Contrasting Strategies. *Transnational Law and Contemporary Problems* 17(2), 393-412.
- Bienkowski, P. (1985). New Caves for Old: Bedouin Architecture in Petra. World Archaeology 17(2).
- Bocco, R, & Jaubert, R. (1994). The Return of the Bedouin. UNESCO Courier 47(11).
- Burnett, G. W., Al Baqaim R.N., & Dirksen M. (1999). The Situation of the Bedouin of Jordan's Karak Plateau. *Journal of Third World Studies (16)2.*.
- Carrol, L. (2008). Sowing the Seeds of Modernity on the Ottoman Frontier: Agricultural Investment and the Formation of Large Farms in Nineteenth-Century Transjordan. *Journal of the World Archaeological Congress*.
- Cole, D.P. (2003). Where Have the Bedouin Gone? *Anthropological Quarterly*, 76(2), 235-67.
- Dean, J (2005). Communicative Capitalism: Circulation and the Foreclosure of Politics, *Cultural Politics*, 1(1).

- Decker, M. (2009). Tilling the Hateful Earth. Oxford UP.
- Embassy of Jordan (Washington, D.C.) (2005, Feb 7). Embassy Events. *Jordan Embassy U.S.A.*.

  Retrieved from <a href="http://www.jordanembassyus.org/new/events/event02072005.shtml">http://www.jordanembassyus.org/new/events/event02072005.shtml</a>.
- Escobar, A. (1998). The Problem of Nature Revisted: History and Anthropology. *Current Anthropology*, 39(3).
- Falconer, Steven E. "Rural Responses to Early Urbanism: Bronze Age Household and Village Economy at Tell El-Hayyat, Jordan." *Journal of Field Archaeology* 22.4 (1995): 399-419. Print.
- Fall, P.L., Falconer S. E., & Lines L. (2002). Agricultural Intensification and the Secondary Products Revolution along the Jordan Rift. *Human Ecology* 30(4), 445-82.
- Hantouli, B.. (2010) The Bedouls of Petra. *Ammarin Bedouin Camp*. Retrieved from http://www.bedouincamp.net/bedoul.html.
- Jordan Ranks Fourth in UN E-Government Survey. (2010, Mar 23). *Jordan News Agency*. 23 Retrieved from <a href="http://www.petra.gov.jo/Artical.aspx?Lng=1&Section=General%20">http://www.petra.gov.jo/Artical.aspx?Lng=1&Section=General%20</a> News&Artical=179469>.
- Jordan Special Interest Tours. (2008) *Petra Nights Tours*. Retrieved from <a href="http://www.petranightstours.com/jordan\_special\_interest\_tours.htm">http://www.petranightstours.com/jordan\_special\_interest\_tours.htm</a>.
- Khairy, M. O. (1984). *Jordan and the world system development in the Middle East*. Frankfurt am Main: Peter Lang.
- Khatib, I. & Elmadfa, I. (2009). Poor Nutritional Health of Bedouin Preschool Children in Jordan: The Irony of Urbanization. *Nutrition and Metabolism*, 54, 301-09.
- Khazanov, A. M., & Wink A. (2007). *Nomads in the Sedentary World*. Abingdon, Oxon: Routledge.
- Khresat, S. A., Rawajfih, Z., &. Mohammad M. (1998). Land degradation in north-western Jordan: causes and processes. *Journal of Arid Environments* 89, 623-29.
- Koch, J., Schaldach, R., & Köchy, M. (2008). Modeling the impacts of grazing land management on land-use change for the Jordan River region. *Global and Planetary Change 64*, 117-87.

Kuijt, I. (2002). Pre-Potter Neolithic and Late Natufian at 'Iraq ed-Dubb, Jordan. Journal of Field Archaeology 29(3/4) 291-308.

- LaBianca, Ø. S. (2006) Tells, Empires, and Civilizations: Investigating Historical Landscapes in the Ancient Near East. *Near Eastern Archaeology* 69(1).
- Levy, U. (1999) Lost civilization of Petra. Edinburgh: Floris.
- Ma'ayeh, S. P. (2010) Jordan's Bedouins Consider Returning to Caves The National Newspaper. Home Page The National Newspaper. Retrieved from <a href="http://www.thenational.ae/apps/pbcs.dll/article?AID=/20100322/FOREIGN/703219913/1042/BUSINESS">http://www.thenational.ae/apps/pbcs.dll/article?AID=/20100322/FOREIGN/703219913/1042/BUSINESS</a>.
- Madeley, J. (1996). Help from the Heavens. New Scientist, 7.
- Mithin, S, Jenkins, E., Jamjoum, K., Nuimat, S., Nortcliff, S., &l Finlayson, B. (2008). Experimental crop growing in Jordan to develop methodology for the identification of ancient crop irrigation. *World Archaeology*, 40(1), 7-25.
- Politis, K. D., ed. (2007) The World of the Nabataeans Volume 2 of the International Conference The World of the Herods and the Nabataeans held at the British Museum, 19 April, 2001. Franz Steiner Verlag,
- Portnov, B. A., &. Safriel, U.N. (2004) Desertification in the Negev: dryland agriculture vs. dryland urbanization. *Journal of Arid Environments* 56, 659-80.
- Qalyoubi-Kemp, R. & Kemp, T. (2007) Reciprocal Transactions, Social Capital, and the Transformation of Bedouin Agriculture. *Journal of Economic Issues 41(2)*, 409-57.
- Rabia, K.A., Solowey E., & Leu, S. (2007). "Environmental and economic potential of Becdouin dryland agriculture." *Bedouin Dryland Agiculture*, 353-66.
- Racy, A. J. (1996). Heroes, Lovers, and Poet Singers: The Bedouin Ethos in the Music of the Arab Near-East. *The Journal of American Folklore 109(494)*, 404-24.
- Rees, W. E. (2002). An Ecological Economics Perspective on Sustainability and Prospects for Ending Poverty. *Population and Environment*, 24(1), 15-46.
- Richard, S. (2003). Near Eastern Archaeology A Reader. Winona Lake: Eisenbrauns,
- Richards, A (1993). Bananas and Bedouins: Political Economy Issues in Agricultural Sector Reform in Jordan.. Amman: USAID/Amman.
- Ronay, V. (2002). The Soul of Petra. *The World & I* 188th ser. 17(6), 188-92.

- Rowe, A. G. (1999). The exploitation of an arid landscape by a pastoral society: the contemporary eastern Badia of Jordan. *Applied Geography*, 345-61.
- Sassen, S. (2008) Neither Global nor NationalL Novel Assemblages of Territory, Authority and Rights. *Ethics and Global Politics* 1(1-2), 61-79.
- Sassen, S. (2006) *Cities in a World Economy (3rd Edition)*, Sage/Pine Forge Press: New York and London.
- Sassen, S. (2002) Towards a Sociology of Information Technology. *Current Sociology*, 50(3) 365-388
- Satterthwaite, D, & McGrahanan, G. (2003) Urban Centers: An Assessment of Sustainability. *Annual Review of Environmental Resources*, 28 243-274.
- Satterthwaite, D., Huq, S., Pelling, M., Reid, H., & Lankao, P. R. (2007) Adapting to Climate Change in Urban Areas: The Possibilities and Constraints in Lowand Middle-Income Nations, *Human Settlements Discussion Paper Series*, International Institute for Environment and Development, 1-107
- Schmidt, M., Lucke, B., Baümler, R., Al-Saad, Z., Al-Qudah, B., & Hutcheon, A. (2006) The Decapolis region (Northern Jordan) as historical example of desertification: evidence from soil development and distribution. *Quaternary International 151*, 74-86.
- Shoup, J. (1984). Nomads in Jordan and Syria. Cultural Survival Quarterly, 8(1).
- Shoup, J. (1985). The Impact of Tourism on the Bedouin of Petra. *Middle East Journal* 39(2) 277-91.
- Shryock, A. (2004). The New Jordanian Hospitality: House, Host, and Guest in the Culture of Public Display. *Comparative Studies in Society and History, 46, 35-*62.
- Shryock, A., (1996) Tribes and the Print Trade: Notes from the Margins of Literate Culture in Jordan. *American Anthropologist, New Series, 98(1)*, 26-40.
- Simms, S. R., & Russell, K. W. (1997). Tur Imdai-Rockshelter: ARchaeology of Recent Pastoralists in Jordan. *Journal of Field Archaeology*, 24(4) 459-72.
- Smith, A. M. (2005). Bir Madhkur Project: A Preliminary Report on Recent Fieldwork. *Bulletin of the American Schools of Oriental Research 340*, 57-75.
- Smith, A. M. (2005). Pathways, Roadways, and Highways: Networks of Communication and Exchange in Wadi Araba. *Near Eastern Archaeology* 68(4), 180-89.
- Spicer, N, J. (2005). Sedentarization and children's health: Changing discourses in the northeast Badia of Jordan. *Social Science and Medicine*, *61*, 2165-176.

Stiles, D. (1993) Listening to the People: Social Aspects of Dry-land Management. [Nairobi]: United Nations Environment Programme.

- Tarrow, S & McAdam, D. (2005). Scale Shift in Transnational Contention. *Transnational Protest and Global Activism*, D. Ports & S. Tarrow (eds), Rowman & Littlefield Publishers: Lanham, 2005), pp. 121-150
- Tell, T. (1994) Village, steppe and state the social origins of modern Jordan. E. Rogan (ed). London: British Academic.
- Thomas, D. S. G., & Middleton, N. (1994). *Desertification: Exploding the Myth.* Chichester: Wiley.
- Trombly, M (2000, Oct. 16). Volunteer brings computers to the Bedouin. *Computerworld.*.
- Tsoar, H. (1995) Desertification In Northern Sinai In The Eighteenth Century. *Climactic Change 29*, 429-38.
- UNEP (1994). United Nations Convention to Combat Desertification. Nairobi.
- United Nations University. (2009). Mapping the Effects of Climate Change on Human Migration and Displacement," *Institute for Environment and Human Security*, 1-26.
- University of Arkansas. (2008, Mar 3). Keeping Traditions in a Modern-Day Bedouin Village.
  - PhysOrg.com Science News, Technology, Physics, Nanotechnology, Space Science, Earth Science, Medicine. Retrieved from. <a href="http://www.physorg.com/news123774868.html">http://www.physorg.com/news123774868.html</a>.
- U.S. Department of State. (2010, Mar) *Jordan*.

  Retrieved from <a href="http://www.state.gov/r/pa/ei/bgn/3464.htm">http://www.state.gov/r/pa/ei/bgn/3464.htm</a>.
- Walls, J. (1980). Land, Man, and Sand: Desertification and Its Solution. New York: Macmillan Pub.
- Wardam, B. (2006, Mar 4). Jordan Loses 30,000 Donums Annually by Desertification Arab Environment Watch. Retrieved from <a href="http://www.arabenvironment.net/archive/2006/3/27508.html">http://www.arabenvironment.net/archive/2006/3/27508.html</a>.
- Wardam, B. (2010, Jan 11). The Green CornerEducation and Training for Green Economy. *The Star.* Retrieved from <a href="http://www.star.com.jo/main/index.php?option=com\_content&view=article&id=17116&Itemid=133">http://www.star.com.jo/main/index.php?option=com\_content&view=article&id=17116&Itemid=133</a>.
- Warner, K., Ehrhart, C., de Sherbinin, A., Adamo, S., & Chai-Onn, T. (2009, May).

In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement. *Institute for Environment and Human Security*, United Nations University, 1-26.

Zolberg, A. R. (2006) Managing a World on the Move. *Population and Development Review 32*, 222-53.