Urban Growth in Complicated Geopolitical Urban Context
-Analyzing the Growth Patterns on Fringe Area in Hebron City-

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Abstract
Hebron City has been subjected to complicated geopolitical conditions. Hebron's urban growth has been highly influenced by various geopolitical factors imposed by the colonization power since 1967 and have been intensifying after 1994 Peace Process. The purpose of this paper is to study the association between the geopolitical factors and the urban growth patterns on the fringe area of Hebron City after 1996 Oslo Accords by examining the influence of the colonization settling activities, control area authority, and closure measures adopted by the colonization authorities since 2000. By comparing the urban growth densities based on maps between 1996 and 2007 and their patterns with the geopolitical map in the last ten years, the research found the following: First, there is a strong association between the restriction levels resulted from the geopolitical condition and the growth densities on the fringe area. Second, part of the proposed new jurisdiction area has limited expansion capacity as well as negative impacts on greenery areas.

Keywords: colonized city; geopolitical map; urban growth; city fringe area; Hebron City

1. Introduction
The geopolitical attributes are major driving forces in manipulating the urban spaces of colonized cities located in regions under conflict. Large portion of land will not be planned for the benefit of its local residents, but rather the colonization power will redraw the physical landscape in order to provide security, geographical mobility, and territorial sovereignty for one group on the expense of the other. Urban growth and developments in these colonized cities are shaped by inequalities regardless of the landownership rights of the local residents. The delineation and the expansion of municipal boundaries of these cities involve much more political consideration than geographical administrative consideration. Hence, growth beyond boundaries is not only a reflection of the future form of this city, but also is a reflection of power struggle and control issues over land and its resources. The purpose of this paper is to study the spatial outcomes of the geopolitical attributes in Hebron City in the Palestinian Territories particularly after singing Oslo Accords¹ in 1993. This research will examine the influence of the Israeli colonization authorities in terms of the settling activities, area division of control authority, and the separation and restriction measures imposed on the urban growth of Hebron City fringe area. The research then compares the results with the future growth policies adopted by Hebron municipality. The research uses maps and reports issued by different institutions. This research neither takes any political side, nor focuses on the morality of these geopolitical attitudes, but rather aims at mapping the spatial outcomes of these attributes on Hebron in order to build a better long term strategy on city governance level to offer more efficient solutions for managing urban growth and sustaining spatial contiguity.

2. Objectives and Methodology
The city fringe area lies immediately outside the jurisdiction line designated by the municipality. Despite the fact that administratively the fringe falls under a different area, in normal circumstances, for the residents of the fringe there is hardly any difference except the existence of a number of small villages and semi urban centers located within less than 1 km² from Hebron City, which have their local municipalities and geopolitical conditions. This is

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reflected in the data provided by the city municipality, which does not cover the areas near these villages. The geopolitical map is composed of all the elements that impose any restriction on Palestinians in terms of land use, land ownership rights, mobility, and accessibility. This includes three basic elements; Israeli settling activities, area division of control authority, and closure elements (such as checkpoints, roadblocks, etc.). The data of Israeli settling activities is based on the reports published by Peace Now and B’tselem. The data of restriction measures is based on closure maps of 2007 issued by OCHA. The area division of control authority is based on Hebron Protocol Map of 1997, which evolved from Oslo accord. In addition, the paper will evaluate Hebron City planning policy by examining the new jurisdiction line proposed in 2005 for the city expansion with the previous analysis. Interviews with some of the staff members of the planning units in Hebron municipality were carried out concerning the planning system and future policy.

3. The Urban Context of Hebron City

3.1 The historical growth

Hebron is located 30 km south of Jerusalem in the West Bank (Fig.1.). Hebron Governorate covers 997 km² with 543880 inhabitants; as of 2006 around 166,000 of them lived inside the city (PCBS, 2006). The city is built on several hills and valleys, most of which run north to south. The urbanization started around the Abraham Mosque, 'The Cave of the Patriarchs', the holiest religious spot in Hebron. The city expanded into two directions; to the north towards Jerusalem and to the south towards Beer Shiva (Fig.2.). Between 1928 and 1984, urban jurisdiction area of Hebron expanded from 2 to 25 km². The population increased from 16 thousands in 1922 to 24550 in 1944, 38309 in 1967, 130000 in 1997, and to 167 thousands in 2006. The growth in population was accompanied by a large increase in housing demand. The majority of land within the municipality boundaries (jurisdiction) is privately owned and most of the developments are initiated by the private sector. Since 1948, the pace of urbanization, particularly housing development, showed turbulent trends depending on the political conditions. Today, the built area is characterized as highly dense in the old fabric, of medium density in the commercial zone, and of low density in the other areas. The hilly character of the area has affected the street network and shaped the expansion patterns to a high degree.

3.2 The exiting urban planning system

There is no current master plan for Hebron City; only jurisdiction boundaries with some restrictions on...
housing development apply in the Industrial Zone (Abu Rajab, 2008). The political history of the Palestinian cities has developed an impaired urban planning system in Hebron due to a succession of colonial and self-interim governments. The evolution of the planning system of Hebron since 1920s can be divided into four phases; the British Mandate in Palestine (1918 - 1948), the Jordanian rule in the West Bank (1948 - 1967), the Israeli occupation since 1967, and the Palestinian National Authority after 1994. Today, the only existing plan for Hebron is the Mandate plan (approved in 1944) for an area less than tenth of the present municipal area for only population of 20,000. No plan was made during Jordanian rule, and no studies have been carried for any plan made during the Israeli occupation. Development control decisions are made by reference to the Mandate plan and by extending the zones outwards to the present municipal boundary, where the lines for roads are reserved by attempting to persuade landowners on an individual basis to conform to setbacks. Hebron still operates on this basis within the old municipal boundaries, which are incompatible with current development needs (Abdul-Hadi, 1994). Moreover, after Israeli occupation in 1967, the Israeli authorities issued a series of Military orders to control land and its resources, which included transferring all powers granted in the Jordanian law to the Minister of the Interior, the supreme planning court, and the Commander of Israeli Defense Forces. Since then, the planning system has been operating along two separate tracks – one for Israelis and the other for Palestinians (Beteslem, 2002). This system aimed at promoting the construction and the expansion of Israeli settlements on the one hand and preventing the expansion of Palestinian towns and villages outside borders of their municipalities on the other.

3.3 The current geopolitical context

The explanation of the current geopolitical conditions that exist within and on the out skirt of the city can be classified chronologically into three phases; the settlement construction & expansion period; the after Oslo Accord period, and during the eruption of second Intifada after 2000. See Fig.3.

3.3.1 The Israeli Settlement

In 1968, the settling activities of Israeli inside the old City of Hebron began and the expansion of these settlements has continued until today. In 2007 there were 17 settlements and outposts in Hebron Governorate, which covers an area of 9.695 km², of which more than 2.57 km² (26%) is located with less than 2 km from Hebron City jurisdiction of 1985. There are four main settlements inside the Old City –

Fig.3. The Restrictions and Israeli Settlements in 2007 (Source OCHA closure map)
Avraham Avinu, Beit Romano, Beit Hadassah and Tel Rumeida. Around Hebron City there are two main accumulation; Qiryat Arba (originally Qiryat Arba, Givat Haqivot, and Harsina Settlement area) in the east and Haggai in the south. The percentage of Hebron Governorate land occupied by these colonies increased from 0.50% in year 1989 to 1.12% in 2000, while the population in the colonies increased from 8044 to 13781 (PASSIA, 2003). According to International law, all these settlements constructed in Hebron governorate are illegal. 30.2% of the settlement land in Hebron belonged to privately owned Palestinian land, 63% belongs to land was confiscated by Israel after 1967, and 6.6% of the land is survey land (Peace Now, 2006). None of the land is Israeli owned land. Moreover, the areas of settlements as their jurisdiction areas are constantly expanding. The rearrangements of their administrative borders to adapt with the new outline plan have been not published to public until recently. Expanding their jurisdiction can involve expelling Palestinians from their land or banning them from grazing in. Palestinians are barred from entering the jurisdictions of the settlements or the settlements, unless they are granted special permission.

The separation between the Israeli settlements and Palestinian urban fabric started after 1980s, following the tensions occurred between local residents and Israeli settlers. This tension has intensified after 1994 resulting in more separation policies imposed by the Israeli military mostly in the old section of the city. After 1996, further restrictions on Palestinian movements around these settlements have been imposed. According to Oslo accords and Hebron protocol agreement, Hebron governorate was divided into 5 types of area control of authority; H-1, H-2, C, B, and A. Hebron City itself was divided into three areas; first, area H-1 composes 82% of the jurisdiction area, in which the majority of the Palestinian population resides and the Palestinian authority is responsible for internal security and public order. Second, area H-2 composes 17.7% and comprising all the Israeli settlers living inside the old city of Hebron together with 20,000 Palestinians. In H-2 area, all responsibilities for security and public order have remained with Israel. Civil powers and arrangements (such as planning, building and zoning) and responsibilities in both areas have been transferred to the Palestinian side with restrictions on building activities. The third area, C, composes only 3% and Israel has full military and administrative control. Israel controls the planning mechanisms and land allocation completely. Most of Israeli Settlements are built in this area. Getting a permit to build is quit hard for Palestinian. Palestinians must apply for a permit from the Israeli authorities in order to build any structure; otherwise, the building is liable for demolition. The restrictions also extend to major infrastructure plans, development and maintenance projects. Fourth, Area B and it is located on the outer area of Hebron City. In area B, Palestinians have civil control and while Israel keeps the security control. Fifth is Area A. Palestinian authority has full control of Palestinians with no restriction on building activities and permissions. The map in the Fig.3. shows the area control division.

3.3.3 Second Intifada Period

The eruption of the second Intifada in 2000 led to a large expansion in the Israeli separation policies, which entailed unprecedented restrictions on Palestinian movement inside and around Hebron City. In 2007, there are 219 closure elements (20 checkpoints, 20 road blocks, 26 road gates, 112 earth mounds, 36 road barriers, and 5 earth walls) adding to other 76 elements of closure within the Hebron governorate. Many of these elements are located on the By-pass road of 60 and 35 that surround Hebron. Prior to the outbreak of the Intifada in 2000, Palestinians could use some parts of the bypass roads. After that, Israel drastically reduced Palestinian access to all roads traveling through the West Bank, including bypass roads.

4. Analysis

4.1 Categorizing the fringe area

The characteristics of the Hebron fringe area can be classified into three levels of restriction intensity and 11 sub-levels based on the geopolitical map of Hebron in 2007 in Fig.3. Fig.5. shows the share of each intensity levels on city fringe:

A) Low restriction level: This level includes the areas, which have the minimum restrictions on the Palestinian building developments and mobility. It composes 28.1% of the total fringe length and it is located mostly on the western part only. This level is sub-divided into two categories:

L1: Urban growth from Area H-1 to Area A. There are no restrictions on the construction activities. It composes 23.3% of the jurisdiction boundaries of Hebron.

L2: Urban growth from Area H-1 to Area B. Despite the fact that there are no restrictions on the building activities in this level, Palestinians control only the civil issues, whereas the security issues still with Israeli. It composes only 4.8% of jurisdiction boundaries.
4.2 The built densities between 1996 and 2007

This section analyses the influence of the geopolitical context on the urban growth based on the previous categorization levels. Simply, the new built units between 1996 and 2007 inside and within 500 meter on the outer fringe area of the city are extracted and the built densities are calculated. The analysis results are compared to previous urban growth (built densities) before 1997 (Fig.7).

A) The new buildings density within the city jurisdiction of 1985: The city has three types of areas and the three have different densities of new units built between 1997 and 2007; In area H-1 where Palestinian authority has the maximum civil powers, the density reaches 98 units per km\(^2\), The total number of units is 2331 with an approximate area of 756900 m\(^2\). In area H-2 where Palestinian still has civil authorities but with some restrictions, the density reaches 57 units per km\(^2\). The total number of units is 290 with an approximate area of 121425 m\(^2\), which is around 2.4% growth. In area C, which is a small section located in the southern west edge, the density reaches 8 units per km\(^2\). The total number of units is 7 units with an area of 1437 m\(^2\), which is only 1.7% growth.

B) Within 500 meter from the 1984 city jurisdiction: There are three types of area based on authority on the outer limits; A, B, and C. The density of units changes as the area of control changes: In area A there are 125 units per km\(^2\) which were built between 1996 and...
2007 within less than 500 meter from the city fringe line. The total number of units is 422 with an area of 113079 m$^2$. This density decreases to reach 81 units in area B. The total number of units in area B is 116 with an area of 45753 m$^2$. In area C the density is only 56 units per km$^2$. The full built area is 205928 for 569 units. It is interesting that Area A has the highest density, even higher than the density within area H-1 inside the city itself. This may be related that in Area A there no any Israeli imposed restriction from any type unlike H-1 where in certain parts there are some restrictions. However, other factors such as topography or land prices could play part in that difference.

C) The new units built based on levels of restrictions:
By looking at the three levels; low level has 125 units per km$^2$, medium level 66 units per km$^2$, and last the high level has 33 units per km$^2$ and within these levels the ten categories the density follow this levels. First, the low level: the two sub-levels show high density of the new built units. Level one has 126 units per km$^2$. Level two 118 units per km$^2$. Second, the medium level: This level has 5 sub levels; level one has a high density reaches to 121 units per km$^2$, which is even higher than the second type of low-level type two. The second and third types in medium level have the same density (53 units per km$^2$). There is no difference in the city expansion irrespective of whether the restrictions on streets are within or beyond the city jurisdiction.

D) The fourth type of medium level has 46 units per km$^2$. The last type in medium level has only 9 units per km$^2$, which is the lowest in all the levels. Third, the high restriction level has three types with close density values; same value for the types where the expansion is from H-2 towards area C with either Israeli military area or settlements but with only restriction on one main roads. The other last type, which has 30 units per km$^2$, is the type with the highest restriction with two roads with restrictions and has settlements and Israeli bases within their envelope.

By looking at the second table in Fig.7., which shows the building growth before 1996. Area A had the lowest building density (only 25/m$^2$) followed by Area B with 41 units/m$^2$ and then Area C with small difference from B. Comparing this data with the previous table shows that growth patterns were opposite before 1996. On the side of the density based on restriction levels; the low level and medium level have close values while the high level has the highest density. Most of the sub levels in the three levels showed different patterns of growth density before 1996. For example, L1 shows low density (only 22 /m$^2$), L2 and I9 show close values although they showed high difference in density value after 1996. However, I-10 level, the highest restriction level showed the lowest values in both periods. Almost the area was empty before 1996.

The section can be summarized as follows: the geopolitical factors have affected the urban growth density on the fringe area and there is a strong association between the restriction levels and the built density. This can be supported by the fact that previous growth patterns showed different tendencies in the city fringe area.

5. The Proposed New Jurisdiction of Hebron City
The jurisdiction of Hebron City expanded five times during the last 100 years. The last proposed expansion of the area was in 2005 and it is still under negotiation between Hebron municipality and the self- interim Palestinian authorities. However, issuing building permits has started only in mid 2008 (Abu Rajab, 2008) and only 10 building permits have been issued since then. The new jurisdiction line is shown in Fig.8. The proposed area is located either in area A (65%) or area B (35%) and is divided into two separate zones, which makes the overall proposed jurisdiction area of Hebron non-contiguous. In the western zone, most of the area is located in area A and it follows the growth expansion pattern after 1996 and its street network but it avoids combining any other existing smaller villages like Taffuh in the west and the big expansion on the...
route to Dura City. The new proposed zone follows the existing growth patterns rather than proposing a future vision for the west section of the city. In the southern proposed expansion the area is almost equally divided between area A and B and it avoids combining the centre of other villages. However it includes scatters of the new built units that lie on the outskirts of these villages. By looking at the natural characteristics of the proposed area, two main points can be noticed: first, the topographical characteristics of the western zone may limit the expansion as explained before and will affect scarce greenery areas left. According to research done By ARIJ, the best ways to sustain Hebron’s natural resources is to keep the future urbanization on the eastern sections. Because of excessive slope, the build-able areas are limited.

Fig.8. Proposed Jurisdiction Area of Hebron in 2005

6. Conclusion
This research has examined the relationship between the urban growth densities on the city fringe area with the geopolitical conditions that Hebron has been facing particularly since 1996. The main results are: first the geopolitical factors have affected to a large degree the urban growth density on the fringe area of Hebron City. The data shows a strong association between restriction levels and built densities. This is supported by the fact that previous growth patterns showed different tendencies in the city fringe area. Second, the proposed new jurisdiction of Hebron City has followed the area control-based division rather than sustainable expansion. Since this research has only analyzed a limited area of the fringe, further research on the relation between the city and the semi-urban and small villages may give a better picture of what is happening in the fringe area.

Notes
1. Such as Military Order 58 in 1967, which gives of absentee land to Israeli military and defines absentee as someone who left Israel before, during, or after the 1967 war. Military order 59 in 1967, which establishes Israeli Military-appointed position of "Custodian of Government Property" to take over land owned by Jordanian Government. Also, allows the "Custodian of Government Property" to appropriate land from individuals or groups by declaring it "Public Land" or "State Land", the latter which it defines as land that was owned or managed by, or had a partner who was an enemy body or citizen of an enemy country during the 1967 war. Military Order 291 in 1968 gives the Military control over all disputes involving land and water and cancels incomplete Palestinian land ownership registrations and land disputes being heard by the Jordanian Settlement of Dispute Courts. Military Order 321 in 1969 gave Israeli Military right to confiscate Palestinian land in name of 'Public Service' (left undefined), and without compensation. Military Order issued in 1994 for building by-pass roads.
2. Oslo accords or Declaration of Principles on Interim Self-Government Arrangements are a series of agreements concluded between Israel and Palestine Liberation Organization (PLO) between 1993 and 1998. The Accords provided for the creation of a Palestinian Authority, which had responsibility for the administration of the territory under its control.
3. The housing developments speeded up in 1950s and 1960s with housing the refugees of 1948 war. Then it slowed down in the following 10 years and in the first Intifada in 1980s. However, the urbanization speeded up once again after Oslo Accord in 1994 before slowing once again after the eruption of the Second Intifada in 2000.
4. Such as Military Order 58 in 1967, which gives of absentee land to Israeli military and defines absentee as someone who left Israel before, during, or after the 1967 war. Military order 59 in 1967, which establishes Israeli Military-appointed position of "Custodian of Government Property" to take over land owned by Jordanian Government. Also, allows the "Custodian of Government Property" to appropriate land from individuals or groups by declaring it "Public Land" or "State Land", the latter which it defines as land that was owned or managed by, or had a partner who was an enemy body or citizen of an enemy country during the 1967 war. Military Order 291 in 1968 gives the Military control over all disputes involving land and water and cancels incomplete Palestinian land ownership registrations and land disputes being heard by the Jordanian Settlement of Dispute Courts. Military Order 321 in 1969 gave Israeli Military right to confiscate Palestinian land in name of 'Public Service' (left undefined), and without compensation. Military Order issued in 1994 for building by-pass roads.
5. Israeli is defined as who is "A resident of Israel, who resides in the area and is a citizen of Israel, or who is entitled to immigrate to Israel according to the Law of Return, 1950, as it is valid in Israel, and anyone who is not a resident of the area, and has a valid entrance permit into Israel."
6. Other surrounding settlements are Adora, Asfar, Harsina, Telem, Karmel, and others spread all over the governante.
7. Survey land refers to property whose ownership is in dispute, generally in cases where a Palestinian's title to the land is being challenged by Israel. Under Israeli law, such land cannot be developed legally, either by the State or by the Palestinian claiming ownership. However, 5.7% of settlement territory is "survey land".
8. The jurisdiction areas are tortuous and include non-contiguous areas. It includes empty areas that are not attached to any settlement but designated for future expansion and parts of them are used as IDF military base or defined as natural reserves where any development is prohibited.
9. It was very rare to publish such data to the public, requests to the Civil Administration for this data, based upon the Freedom of Information Law is required. The data on the jurisdictions of the settlements was published finally in 2005 for the first time. It shows the expansion of jurisdictions of the settlements by military orders during the 1990's and after Oslo I agreement.
In 1996, a military order declared that all the areas of the settlements (including the jurisdiction) to be a "closed military area.... this declaration do not apply to Israelis." Access and movement restrictions exist for Palestinians on all roads that run between, toward or adjacent to these area. Palestinians need to obtain prior coordination with IDF to pass (and that includes farmers).

In order to avoid friction that may result from building activities in H-2, the Protocol lists a number of restrictions on construction activities (height, capacity, use) and on infrastructure improvement and transportation control within a certain range in H-1.

94% of Palestinian permit applications for Area C building were refused by the Israeli Civil Administration between 2000 and September 2007. Only 91 permits were granted to Palestinians, but 18,472 housing units were built in Israeli settlements. In addition, 1,663 Palestinian buildings were demolished, against only 199 in the settlements (Peace Now, 2007). Villages such as Taffuh in the west, Saer in the east, and Halhul in the north.

The By-pass roads were constructed between 1994 and 1996 basically to connect the Israeli settlements inside the west Bank.

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