

Chapter Nine

Higher Education

9.1 Introduction and Summary

The issue of higher education in the framework of Jerusalem's master plan has been examined by us, with an emphasis on two aspects:

- A. The financial aspect, especially the interaction between industry and higher education.
- B. The developmental aspect of different types of higher education, in Israel and in Jerusalem specifically, while creating a memorandum of policy based on all findings in the two documents.

Special consideration has been given to two large populations in the city – the ultra-orthodox population and the Arab population, which have only lately been exposed to the advanced industry employment market. Because of the special characteristics and the social separation of these populations, they require specific academic solutions.

During work, we have identified a process of increasing democratization of higher education in Israel. In the last decade of the 20th century, new colleges have been established, offering a wide variety of fields of study and subjects, which have been recognized. In addition, the process of academization of existing colleges has been accelerated, especially in regard to teacher colleges. The enormous increase of the number of students, in all the academic institutions, somewhat diminished the decrease in Jerusalem's share of the total number of students which acquire higher education in Israel. **Jerusalem still leads in the percentage of advanced degree students**, in the framework of the Hebrew University, but with the democratization of second degree approvals for many of the academic colleges, it might be negatively affected. Over time, if no real change occurs, the backing of institutions in Jerusalem, especially the Hebrew University, will be affected, **as higher education in Israel's capital is first and foremost an exporting industry, especially to the national market.**

During work we have also found a process of erosion in education and in student achievements in formal education. The results of this erosion were expressed in the O.E.C.D PISA tests (2000), in which Israel received low rankings. The quality of university and college students depends on preliminary formal education, but higher education can contribute to the improvement of these achievements by properly training teaching and education staffs and through early integration, in order to assist formal education.

In report number 3, in the employment program (pp. 63 – 129), Jerusalem's employment market was comprehensively analyzed, including its anomaly.

This trend can be changed through higher education, its distribution and its penetration to the ultra-orthodox and Arabic population segments, and by emphasizing cooperation with industry and its requirements, in order to change the city's unstable economic base. Jerusalem is blessed with institutes of higher education. In addition to the Hebrew University, the first generation colleges were recognized in the 70's, including the art colleges (Bezalel and the Music and Dance Academy), and some of the teacher colleges which were recognized for granting a B.Ed. **On the**

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other hand, the great trend of the 90's - that of founding academic colleges, has skipped Jerusalem. Specifically, its share in suitable and appropriate institutions for a capital city has been neglected; for example: the lack of a government and management school, intended for public servants, and choosing a location for the prestigious military colleges (the National Security College, and the Commanders and Staff Academy), which are temporarily located in Israel's center. The city has been left with no technological academic education institutions. In recent years, this need is slowly being answered by the Jerusalem College of Technology, the Hadassah College and the Jerusalem College of Engineering, which has granted degrees to the first class of graduates in 2003. Complimentary to the field of technology, professional tertiary education should be mentioned, which grants technician and practical engineer degrees, and provides an answer to the penetration of the ultra-orthodox and Arab populations into the employment market and professional education, in hi-tech fields.

Every tourist arriving to Israel visits Jerusalem. A college for tourism should be established in the city, in which the variety of tourism-related professions will be studied, both the academic professions, such as management and marketing, as well as the hosting, restaurant and maintenance professions, with the cooperation of the Jerusalem Hotel Association and the institutions of higher education.

In our proposals, as detailed at the end of this chapter, we tried to outline a combined solution which will use the city's public advantages, and the great reputation of the Hebrew University, while attempting to create aspects of constructive competition. Higher education is not just a classroom, a library, a laboratory and a lecturer. In order to become an attractive option for students once again, an institution has to develop new fields of study, especially those which combine different fields, for the new horizons of research in the current century. It needs to create optimal transportation to the city and within the city in order to create easy access to and between the different campuses.

In order to become an attractive option for students from Israel and abroad, student dormitories should be construct at the city's center, and an active student life should be developed and encouraged. Together with the institutes of higher education, this should include the higher yeshivas and kollels that Jerusalem is blessed with, which attract yeshiva students from the city, from the rest of Israel and from abroad, to come to study and settle in the city in its surroundings.

In the field of land assignment and allocation, we found no great difficulty. The planning team recommends that the campuses of existing and new colleges be located in the central business district, as part of the effort of reviving it, and introducing new populations to it, especially in the fields of plastic and electronic art.

We have chosen to conduct an analysis based on a quantitative database, and research works which have been "lying on the shelf". We used data published by the Central Bureau of Statistics, and processed it according to our needs. We used data published by the Council for Higher Education and the Planning and Budget Committee. We have taken data from surveys performed for different purposes, in order to learn about all of the city's sectors. We collected material from research institutions which have dealt with the issue of higher education, such as the Jerusalem Institute for Israel

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Studies, the Floersheimer Institute, the Samuel Neaman Institute in the Technion, the Hebrew University, Bar-Ilan University, and current publications.

This chapter is also based on intensive meetings with many academics who shape higher education in Jerusalem.

Throughout this work, we addressed issues and data, and especially in our operative suggestions for change with regard to the fact that there is a law of higher education in Israel and that institutions of higher education operating under it enjoy complete academic freedom. In conclusion, in a country which is economically based on its human capital, the capital city's master plan should include an essential chapter on higher education.

9.2 Democratization of Higher Education – the Process

Jerusalem has been known throughout the ages as a city of learning and education, even before the establishment of the Hebrew University and Bezalel in the early 20th century, and for a good reason. **Learning as a life style is a central part of the Jewish people's historical and cultural identity.**

The first university established in Palestine-Israel (1925), many years before the establishment of the State of Israel, was in Jerusalem. For years the Hebrew University was the leading university in terms of the number of students, out of all people acquiring higher education in Israel. Leading academics have contributed their knowledge and experience in founding new universities which now adorn Israel's higher education map.

As the country grew and developed, the number of people seeking higher education grew. **In addition to the existing universities, the foundations for developing academic colleges were laid.** Starting with the early 90's, the relative portion of Hebrew University students among university students, excluding the Open University, has stabilized at around 20%. Among first degree students, Jerusalem's share is smaller. The **education industry** is the largest employer in Jerusalem, and **higher education is an industry which is intended for the external market, especially the national market.**

Before the 70's, higher education was regarded in Israel as a research system. Its staff of teachers consisted of exceptional scientists. The student population was meticulously selected, and it had at its disposal laboratories and libraries intended to maintain and cultivate the institution's science-research level.

The change came in the late 60's (Horovitz and Volanski), with the initiative of the Kibbutz movement. In 1971, the Lipson Committee recommended that colleges will offer academic degree courses, with the university's academic patronage. The process was accelerated in the 70's. Bar-Ilan University led this trend. The common pattern offered first year studies in the college and later on completion of studies in the parent university. Over time, a pattern of two years in the college developed and finally, the full course of first degree studies in the college campus. **Jerusalem did not take part**

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in the process of regional college development. Another pattern was created with the **academization of professional institutes** with status and reputation in their fields. Jerusalem enjoyed recognition of Bezalel, the city's old institutions, the Jerusalem Music and Dance Academy, and later on recognition of the higher school of technology, and some of the teacher colleges which were recognized and authorized to grant a B. Ed., all during the 70's.

The great revolution occurred in the 90's. In 1993 the Council for Higher Education approved a master plan for developing new academic systems (colleges). This decision is a cornerstone and turning point in the council's policy. In this way, the Council for Higher Education provided an answer to the great demand for academic studies. **Higher education has become accessible for peripheral populations, and the country became "abundant with schools"**. In the academic year (2003), approximately 227,000 students studied in Israel, in 55 academic institutions, including the universities and the Open University. Approximately 180,000 are first degree students, 38,000 are second degree students, and 8,000 are third degree students (Prof. Shlomo Grusman, "Baacademia", winter 2003).

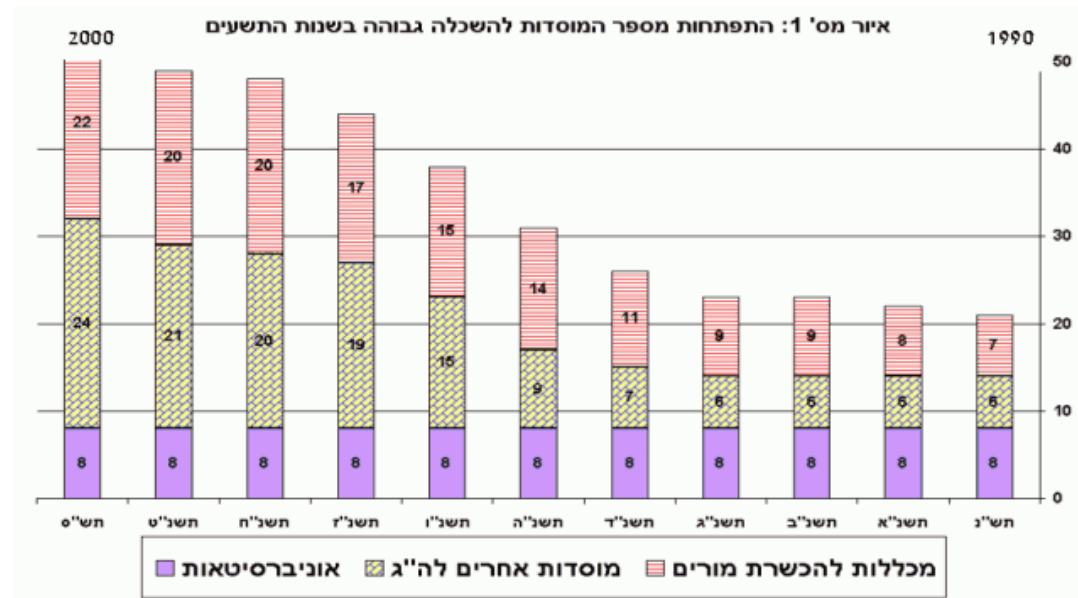


Figure No. 1: The development of the number of institutions of higher education in the 90's.

Legend:

Right to left

-Teacher training colleges

-Other higher education colleges

-Universities

Axes: Number by years

(1990,1991,1992,1993,1994,1995,1996,1997,1998,1999,2000)

In 2001, the Council for Higher Education decided to end the universities' academic responsibility over regional colleges, so that these colleges will be independent. The accelerated process of establishing colleges did not take place in Jerusalem. In recent

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years there is a developing process of opening technological-academic colleges, in addition to Lev institute, which are struggling to grant their graduates a B.Sc. degree. Cinema and theater schools were also opened in Jerusalem which have not been recognized yet, and which may not be recognized in their present form. In Jerusalem, branches of foreign universities (Derby and Touro College) are operating, and are granting their graduates first degrees. There is also the G.T.S (Shechter Institute) for teachers, which grants M.Ed. degrees.

In addition, a number of "embryonic" systems, which have not been recognized yet, are operating in Jerusalem. In the city and in its surrounding the Arabic Al-Kuds University, which provides a (partial) solution to the Arab population, is operating.

The worldwide trend, in developed countries, leads to the expansion of higher education among wider population segments, with the improvement of the economy. **More students are studying for the first degree, and over time, there will be more students studying for advanced degrees.** Jerusalem as a brand and the Hebrew University specifically, have become a source of attraction for international Jewish students. The more the political and security situation improves, there is no doubt more of these students will come, as there are approximately 500,000 Jewish students worldwide (excluding Israel). In a realistic vision in which one percent of these will come for an academic year, the number of students in the Hebrew University will be increased by 25% (according to 2002 data), on the condition that political calm is not an imaginary goal, if additional parameters such as dormitories, employment and proper credit arrangements will be ensured. Establishing colleges in Israel has created a process of democratization of the higher education market. In light of this data, **it is hard to imagine that Jerusalem will be attractive to first degree students, from all of Israel.** It must ensure academic education in a variety of fields, for all people in the city and the surrounding towns, especially to the west towards Kiryat-Gat, Modi'in, Ramla, Lod and Beit-Shemesh. With good transportation arrangements (a fast train to Jerusalem, improved highways, including road 39), it will be possible to develop "academic commuting" in the city.

To achieve this goal, it is imperative and necessary to develop, in Jerusalem, academic college/s with goals and courses of study, according to the market's changing needs and to the students' aspirations. Another option is to expand the fields of study, on basis of the city's existing colleges, and to diversify them, and even to encourage cooperation between institutions, in order to operate joint libraries, laboratories and services which will improve services and lower their costs. Later on it will be necessary to examine institutions which were not yet recognized, such as the cinema schools, and recognize them, whether as autonomous "**boutique colleges**", or as dependants of recognized colleges. In this way, universal accessibility will be ensured to all of Jerusalem's higher education institution's applicants. **The Hebrew University will continue to offer excellence, research and quality of teaching, and if it will decide to, it will also do this within the city's existing institutions and future institutions.**

Horovitz and Volanski, in their analysis of Israel's higher education system, present Martin Trow's model (ibid, p. 935) describing the development of higher education in the western world, as a three-stage system. In the first stage it is elitist, and only few

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have access to higher education institutions (approximately 15% of a year's class). The system's goal at this stage is the development of research, and to create an elite.

In the second stage higher education is expanded, not necessarily according to the classic university model. Approximately 30% of a year's class is integrated in studies and professional training. The purpose of higher education in this second stage is not only to create a research elite, but also to offer professional training. In the third stage, which is the universal stage, higher education is regarded as a fundamental right, and over 50% of a year's class acquire academic education.

According to this model, Israel is in going through the second stage, with regard to the general population, and the first stage, with regard to the ultra-orthodox and Arab sectors, especially in Jerusalem.

Correct preparation for the third stage before us will ensure that the city will retain its central position in the higher education map. Preparations for the assimilation of the ultra-orthodox and non-Jewish populations will ensure the necessary universality for the next generation.

9.3 Higher Education and the Employment Market – Interaction

This work provides considerable attention to the interaction between higher education and industry, especially advanced industry. We have described the industries which have developed during this generation, especially in the fields of information and communication – ICT. We recognized those of the next generation, especially the biotechnology and the nanotechnology industries. We have also determined that the next generation will require interdisciplinary knowledge which combines exact sciences and experimentation with "soft" fields such as management, marketing, accounting, law etc.

Table 1 below demonstrates the development of the ICT industry in Israel, compared to the rest of the economy, over the last decade of the 20th century, which has witnessed the great leap made by higher education, as it is, undoubtedly, the central "brain power supplier" for these industries.

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Table 1 – Development of ICT industries compared to the rest of the economy, in Israel.

| | Units | 1990 | | 2000 | |
|-----------------------------|-----------------------|------------|--------------------|------------|--------------------|
| | | ICT | The entire economy | ICT | The entire economy |
| Local product | Billion NIS | 8.7 | 174.0 | 38.9 | 286.0 |
| Local product | Percent | 5.0 | 100 | 13.6 | 100 |
| Employed | Thousand | 58.7 | 1,598.0 | 148.1 | 2,484.4 |
| Employed | Percent | 3.7 | 100 | 6.0 | 100 |
| Export | Billion US dollars | 2.5 | 17.6 | 13.9 | 46.4 |
| Export | Percent | 14 | 100 | 30 | 100 |
| Product per employee | Thousand NIS per year | 106 | 58 | 369 | 161 |

Table 2 below demonstrates the growing need of advanced industries for professional manpower, compared to the traditional industries. This need reaches its zenith in the hi-tech bubble's peak. The shortage caused, among other things, greater employee mobility, and extremely high salaries.

Table 2 – Employees by degree – comparison of advanced and traditional fields, 1997

| Field | Advanced fields | Traditional Fields |
|--|-----------------|--------------------|
| Engineers and scientists | 14.3% | 2.3% |
| Other academics | 4.6% | 3.1% |
| Practical engineers and technicians | 12.4% | 3.7% |
| Other employees | 68.7% | 90.9% |
| Total | 100.0% | 100.0% |

Source: a review of the manpower structure, work patterns and innovation in industry 1997, Central Bureau of Statistics

Research and development (R&D) is based on brain power, and R&D is the basis of advanced industries. The data in Table 3 below suggest that Israel spends more on civilian R&D than most advanced countries, especially in the last decade of the 20th century.

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Table 3 – National expenditure for civilian R&D, by funding sector and executing sector (million NIS, current prices)

| Funding sector | Executing sector | | | | |
|-------------------------|------------------|----------|------------|------------------|---------------|
| | Total | Business | Government | Higher education | Private NPO's |
| Total | 12,926 | 8,778 | 1,015 | 2,534 | 599 |
| Business | 7,808 | 7,635 | 0 | 100 | 73 |
| Government | 3,932 | 1,143 | 86 | 1'568 | 335 |
| Higher education | 469 | 0 | 0 | 449 | 20 |
| Private NPO's | 182 | 0 | 38 | 73 | 71 |
| Abroad | 535 | 0 | 91 | 344 | 100 |

The data demonstrates another revolution, in the ratio between the private's sector share and the public sector's share in R&D. Thus, for example, in 2000, approximately 70% of civilian R&D was performed by industry. Approximately 60% of it was funded by the business sector. The institutions of higher educations performed approximately a fourth (!) of R&D.

The Jerusalem economy structure is exceptional because of the city's status as a capital city, and the characteristics of the city's populations. Unlike the national average and the norm in other large cities in Israel, **Jerusalem's major employers are in the fields of education (16.88%) and public administration (12.7%)**. In the manufacturing, commerce and business service industries, including the advanced industries of this generation, Jerusalem has a smaller share than its share of the population or the national average (data from the statistical annual, Jerusalem, 2001).

As for the city's disadvantaged share in the advanced industries of this generation, perhaps it is not a coincidence as these are based on studies in the fields of mathematics, computers and engineering - fields in which Jerusalem is at a disadvantage. The city has an obvious advantage in the fields of natural sciences, biology and chemistry (approximately 25%), and therefore it seems ready for the next generation industries. There are currently 24,000 industry employees in Jerusalem, out of which 51% are in traditional industries, and 49% in advanced industries. As for the future, by 2020, 170,000 more employees will be added to Jerusalem's economy. Over half of them will work in local market industries, and approximately 70,000 will work in external market industries. The industries producing for the local market will grow according to the needs of the population, and therefore their survival is guaranteed. However, Jerusalem's standard of living will not improve if the city will not succeed in attracting industries which produce for an external market. It should be stated that we have an interest in industries which can pay well for production factors, which grow and create workplaces, which participate in global economy, which survive in any economic climate, and which do not pollute the environment.

Each time a new generation of advanced industries arises, which answers these criteria, what is common to all of these is that they succeed because of the "brain power" of scientists, engineers, business managers, accountants, lawyers, marketing

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people etc. These are supplied by the higher education industry, but interaction with the academy has many flaws which might affect its relations with industry, as the academy is organized according to the fields of science, and its organizational culture is disciplinary. A researcher's work in a university is appraised by researchers who specialize in the same field, and is rewarded by publications in relevant scientific journals. On the other hand, the organizational culture of start-up companies is project-based. A project is by its nature multidisciplinary, and its developers are rewarded by the commercial success of the entire project. A multidisciplinary project which is intended to produce a technological innovation (a product or a new production process) digresses from the field of "hard sciences" such as mathematics, physics, chemistry etc. to the field of "soft sciences" such as planning, economy, accounting, advertising, and of course management and marketing. **In order for academic knowledge to become a new production process, and a final product, these two organizational cultures must be bridged.** Large companies developed a matrix based organizational culture which bridges the gap between disciplines and projects. Start-up companies are too small for this, and for this bridge to exist, it is necessary to change the universities' organizational culture. The universities must learn to work in a multidisciplinary manner, or a research institute should be established, which will have the organizational culture which will create a bi-directional bridge between academia and industry.

It is necessary to change the relations between higher education and industry so that they will develop not only in a supplier (university) – client (industry) manner, with regard to professional, skilled human resources. **Using the products of the higher education institutions' knowledge for new industry projects is obviously necessary.**

The Hebrew University of Jerusalem can and should lead this trend, but not alone.

9.4 "The Great Light" – The Hebrew University and the "Shadow" it casts on Colleges

The Hebrew University in Jerusalem consists of 4 campuses, 3 of which are in the city (Mt. Scopus, Givat Ram and the Hadassah Ein-Karem Hospital) and one of which is in Rehovot. The Rehovot campus includes the Faculty of Agriculture and Veterinary Medicine and a small university branch for humanities and social studies (this branch was not successful).

Until the mid-60's, most of Israel's students studied in the Hebrew University.

The university was originally located, since its establishment, on Mt. Scopus. After the War of Independence, when Mt. Scopus was disconnected from the city, studies were held in different structures, in the city's western central business district (the Terra Santa building, the Ratisbonne, the Mamila complex, Russian Compound and other locations).

In the mid-50's, the construction of the Givat Ram campus was begun. Most buildings were built between 1954 and 1967, when the city was reunited. At the same time, the

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Ein Karem Campus was being developed. Since 1967, the drive was diverted to the renovation and construction of the Mt. Scopus campus. The great distance between the city's campuses increases maintenance costs and, more importantly, creates an integral difficulty in holding interdisciplinary and multidisciplinary studies. It is hard to imagine a student who has to arrive to Givat Ram from Mt. Scopus, or the other way around, who can do this over the break between classes. In an age in which interdisciplinary studies are on the rise, this distance and accessibility limitation becomes a major problem. Obviously, combined studies with the Faculty of Agriculture (in Rehovot) or even with the Ein-Karem academic center are much more difficult.

Over the last decade, the majority of the increase in the number of first degree students was absorbed by regional colleges which were established, and by the teacher training colleges. In 2002, the percentage of first degree students in colleges was 58%, compared to 1990, in which 85% of first degree students attended the universities. This is all a direct result of the Council for Higher Education's decision (1993) which approved the master plan for opening new academic systems – the colleges.

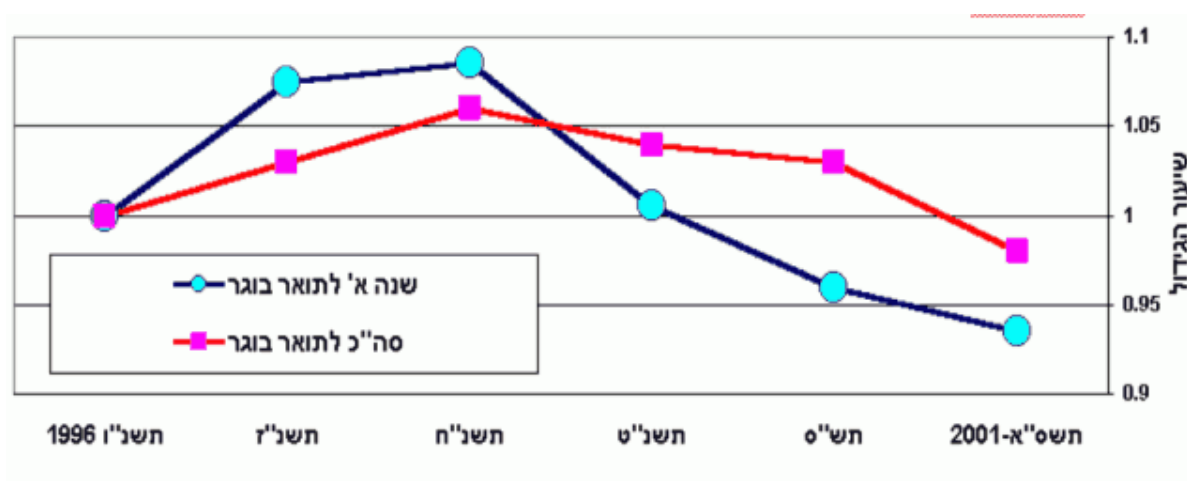
Jerusalem has hardly benefited from this wave of establishing new higher education institutions, because no recognized academic institutions were established in it, except of the Technological College and recognition of the Hadassah College.

As a result of the establishment of colleges, including their widespread distribution, the relative number of students in Jerusalem has decreased, especially that of first degree students. **There is still no "soft" humanities, law or, especially, social sciences college in Jerusalem**, except for foreign university branches (Derby and Touro College). A great part of students in these fields were admitted to regional colleges, which were spread throughout Israel, with a wide variety of study possibilities and fields. Jerusalem witnessed an increase in the number of students only in technological studies, as part of a nationwide trend, but it is hard for new colleges to compete in the home court of the engineering faculties of other universities and especially the Technion. Lev (and Tal) College is an exception to this rule, as they enable technological studies for a special segment of the population (religious and ultra-religious).

The data published by the Hebrew University teaches us that between 1995/6 and 2000/01, there was almost no change in the number of first degree students, but there was a decrease of 14% in the number of first year students, as shown in Figure 2. Over time, this data will hurt the potential for advanced degree students.

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Figure 2 – The ratio of increase in the number of students in the Hebrew University, by degree level, between 1996 - 2001



Legend:

- Circles- First year towards graduate degree
- Squares- Total towards graduate degree

Axes:

Rate of increase by year.

Years 1996 1997 1998 1999 2000 2001

Studying the data, we learn of a period of stagnation in the number of students attending the Hebrew University. The prominent trend is an obvious and continuous decline in the number of first degree students. Table 4 confirms this stagnation, despite it being a time of a great increase in the number of students in Israel.

Table 4 – The Hebrew University, total number of students by large groups

| Group | 1996 | 1998 | 2000 | 2001 |
|-----------------------------|--------|--------|--------|--------|
| Humanities – total | 13,928 | 14,733 | 13,932 | 13,417 |
| Experimental – total | 7,497 | 7,905 | 8,240 | 8,402 |
| Other units | 2,032 | 2,166 | 2,069 | 1,795 |
| University - total | 23,458 | 24,805 | 24,241 | 23,614 |

The condition of the number of advanced degree students in Jerusalem is much better, but we can recognize a decline in it as well, in light of the great increase in the number of high degree students in Israel (see section 9.2 above). Out of over 35,000 second degree students in Israel (in 2001), approximately 6,500 students attended the Hebrew University (approximately 20%).

Table 5 below presents the development over the last 5 years in the number of second degree students, and the distribution of students between the faculties.

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Table 5 – Hebrew University, students and graduates, qualification (1), by large groups.

| Group | Students | | | | Graduates | | | |
|-------------------------------------|----------|-------|-------|-------|-----------|-------|-------|-------|
| | 1996 | 1998 | 2000 | 2001 | 1996 | 1998 | 2000 | 2001 |
| Humanities - Total | 3,841 | 4,247 | 4,340 | 4,404 | 702 | 893 | 1,145 | 946 |
| Experimental – Total | 1,942 | 2,017 | 2,000 | 2,019 | 510 | 473 | 538 | 488 |
| International student school | 10 | 70 | 109 | 113 | - | - | 2 | 8 |
| University - total | 5,793 | 6,334 | 6,449 | 6,536 | 1,212 | 1,366 | 1,685 | 1,442 |

In 2001, 6930 third degree students were studying in Israel, out of which 2,188 were in Jerusalem (over 30%)!

All of the reviewed data clearly shows that the **Hebrew University is a research university par excellence**. The danger it faces is the opening of second degree studies in some of the colleges, including the teacher colleges, and the deterioration of the university graduate base in the city. This will cause a growing dependence on "importing" students for the advanced degrees, in a highly competitive market, and with the moderation of the increase in the number of first degree students over the coming years.

Table 6 summarizes the number of students in the Hebrew University in the years 1996 - 2001, by degree and study framework.

Table 6 – Hebrew University students, by degree and study framework

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|--------|--------|--------|--------|--------|--------|
| First year, graduate | 4,133 | 4,459 | 4,490 | 4,148 | 3,962 | 3,855 |
| Graduate – total | 12,485 | 12,816 | 13,167 | 12,900 | 12,479 | 12,230 |
| Qualified + completion for qualification | 5,793 | 6,046 | 6,334 | 6,407 | 6,450 | 6,537 |
| Diploma | 219 | 218 | 251 | 255 | 198 | 211 |
| Second degree – total | 6,012 | 6,264 | 6,585 | 6,662 | 6,648 | 6,748 |
| Research students | 2,147 | 2,084 | 2,192 | 2,286 | 2,153 | 2,188 |
| Degree studies – total | 20,644 | 21,164 | 21,944 | 21,848 | 21,550 | 21,166 |

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| | | | | | | |
|----------------------------------|--------|--------|--------|--------|--------|--------|
| Preparatory program | 337 | 306 | 421 | 376 | 377 | 366 |
| International students | 1,426 | 1,294 | 1,398 | 1,291 | 1,330 | 1076 |
| Non-degree students in faculties | 792 | 815 | 766 | 789 | 731 | 767 |
| Post-doctorate | 259 | 285 | 277 | 293 | 253 | 239 |
| University total | 23,458 | 23,864 | 24,806 | 24,597 | 24,241 | 23,614 |

It should be stated that the decline in the weight carried by the Hebrew University does not stem from a decrease of the total number of students attending it, but rather stems from the great increase in the total number of students in Israel.

The prediction of the Council for Higher Education, presented in Table 7, shows a trend of significant moderation in the increase of the number of students in the coming years, especially of first degree students. **Because of this, the struggle for students between institutions will be aggravated in the coming years.**

Table 7 – A prediction of the number of students in 2006, compared to the years 1990 – 2001.

| Year | 1990 | 1997 | 2001 | 2006 |
|--|--------|---------|---------|---------|
| 18-year olds | 85,500 | 103,400 | 112,530 | 116,225 |
| Number of first year students | 17,330 | 32,450 | 41,230 | 47,900 |
| Total number of first degree students | 55,250 | 101,290 | 135,800 | 158,230 |
| Total number of second degree students | 16,100 | 27,480 | 35,140 | 43,340 |
| Total number of third degree students | 3,910 | 5,810 | 6,930 | 9,130 |
| Total – including diploma | 76,060 | 135,890 | 179,100 | 212,000 |

70% of students admitted to the Hebrew University come from outside of Jerusalem. Some of them come from the nearby periphery and the metropolitan area, and some of them come from all parts of Israel. The vast majority (over 70%) of Jerusalemites study in the city, most of the in the Hebrew University.

In regard to first degree studies, in light of the abundance of institutions in all parts of Israel, we must ensure that the Hebrew University, with the existing and future

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colleges, will continue to serve as the central institution for surrounding towns, and will encourage a significant reserve of first degree students and graduates.

As for advanced degree studies, there is no doubt that competition will increase in the coming years. The struggle will focus on second degree students (with or without a thesis), as a significant portion of colleges will be authorized to grant this degree.

Jerusalem's ability to maintain precedence depends on a number of factors:

- A. **In the quantitative struggle, it appears that it will not be successful**, in relative terms. The university and the city's colleges are struggling in a saturated environment of academic institutions which are spread throughout the country. **The Hebrew University must maintain precedence in terms of quality, innovativeness and excellence.**
One of the central goals of a research university is training the academic staff reserve and the basic research staff. A prerequisite for these professions is completing a doctorate. **For this reason, in the field of advanced degrees, the university must struggle both for quantity as well as quality.**
- B. The Hebrew University's data (for the statistical year 2001) about first year graduate students (in 1989, 1990, 1991), compared to those who complete the third degree 10 years later (1998, 2000, 2001), shows a ratio of 1:14. In the Hebrew University, as you move from research fields to professional fields, the ratio increases. In nature and life sciences it stands at 6! In humanities it stands at 14, and in social sciences (including business management) – 49. **This means that out of 49 students who start their first degree studies, one completes his third degree 10 years later.** If the university will be able to maintain a high ratio of third degree graduates, more advanced students will attend it, and it will continue to challenge students with exceptional learning capabilities who wish to work in research.
- C. A student base which has not been exhausted yet comes from international Jewish students, especially from the US. Jerusalem has the reputation and the possibility of receiving a large share of them, in the framework of the Rotberg International Student School. The data from recent years suggests a continuous decline in the number of incoming students, for obvious reasons. In the long run, this is a conjectural decline as, in light of the global village and Jerusalem's great reputation, both in terms of the city and the university, an increase is expected, as long as interesting study courses, **generous credit system and proper, available residential options will be ensured.**
- D. The Hebrew University has a large database of researchers and the finest teaching abilities in all fields of study. **It can assist existing colleges** (such as the Technological College) with excellent teachers, and be the driving force in developing a "soft" college, under its patronage, or in the framework of Tzabar Colleges (details below) which are not under its patronage.
- E. In the capital city status section, we state that at the time of opening the colleges, the governments of Israel and the institutions of higher education **did not put the proper effort into ensuring Jerusalem's central status**, as Jerusalem is first and foremost a city of education and learning, in a wide

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range of issues and populations. **Jerusalem's ability to compete in the field of higher education lies in its ability to ensure available residential options and employment for students, with a generous system of scholarships and loans.** In the field of residence, it is possible, by granting differential bonuses, to convince students to live in the city's center, and thus assist the revival of activities in the central business district. The bonuses can be given through municipal taxes, subsidization of rent in preferred areas, discounts in cultural and entertainment centers for students living in the city's center, etc.

- F. The most problematic, yet highly essential, field is **employment**. Jerusalem, being a city of tourist, public service and education has the potential of creating workplaces which are appropriate for students. The accelerated development of hi-tech and biotechnology industries can be a useful leveraging force in assisting the students with available flexible-schedule employment, and to use these for accelerating the development of industry.

Jerusalem's institutions of higher education have not exhausted the employment potential of tutorial project plans, science lessons to gifted youth, the city's many museums, teaching and informal education, assistance to senior citizens, etc. Dealing with all three components - high quality education, available places of residence and employment - could revive and bring higher education in Jerusalem back to its proper place.

Therefore, higher education in Jerusalem enjoys the "great light" – the Hebrew University, but this also casts a huge shadow on it. **An elitist system in an age of expansion of higher education, to the point of it becoming universal, could become an obstacle, if parallel processes will not take place in order to enlarge the student reserves.**

In the field of arts, prestigious institutions have been and are being opened in Jerusalem. Cooperation with these institutions could be very useful. In the field of technology, as a result of diverse initiatives, there is an effort to bridge gaps. The university cooperates with a few of the institutions. **In the experimental profession system the university fulfills its designation.** It is in theoretical fields, and especially in fields of humanities and social science, that the university's shadow is clearly predominant. The university has failed to develop, like other universities, a college for theoretical subjects, and it has limited itself to developing quality and excellence.

The university's great reputation was not used for establishing other systems under its patronage, and it has not even encouraged the establishment of these systems. The Hebrew University has succeeded in maintaining its position as Israel's leader in the training of researchers and the development of research and excellence, but has stayed behind, and has left Jerusalem behind, in terms of the number of first degree students, as an operative reserve for reserve students, and keeping its position as a city which attracts students who live and study in it. **Without neglecting the university's wish to continue and lead the advanced degree and research courses, it should work on opening and developing colleges which could provide a proper quantitative solution.** If the university will fail to do this, other enterprises in the city should be encouraged to deal with this problem, even if this will be done too late, and from a disadvantaged position.

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Another solution, as a turning point in the development of higher education in Jerusalem, with or without any connection to advanced industry, is the **development of courses of interdisciplinary and multidisciplinary study**. The possibilities are almost limitless. This is the trend we recognize in the future. The limitation is the distance between campuses and the (current) difficulty in accessibility. Improvement of the city's public transportation, and especially of the light rail, if its planners will consider this, could be a proper solution of bringing the different campuses and the city's center "closer" (see "Transportation"). All of these will still not solve the issue of the distance to the Rehovot Campus. It is strongly recommended to move that campus to Jerusalem.

9.5 School Education in the City and Interaction with the Academy

Jerusalem is a young city. The number of students in the city under the age of 18 is 195,000. The ultra-orthodox sector, which is the largest one with approximately 75,000 students, is constantly growing. The secular and national religious sector, with approximately 64,000 students, has lost its precedence and is in a constant decline. The municipal (33,000) and private (21,000) Arab sectors are growing. In the past the secular and national religious education system, especially on the high school level, was also used by the surrounding towns. Over the years the towns in the Jerusalem area have developed full education systems. Nowadays students who wish to study in special institution or in the special education system come to the city. In a country which advocates unification of municipalities, this is a clear example of policy which spends twice the funds on investments and constant costs, and which severs the peripheral towns from the central city.

"Raw material" for higher education comes from formal education systems in the city and its area. Data recently published by O.E.C.D countries, which corresponds with our data, suggests there raw material is provided, but the products are unsatisfactory. According to the data, Israel invests between 5% and 10% in education, more than the average of these countries, but in the PISA test for developed countries Israel was ranked among the 30th and 40th places in reading comprehension, mathematics and sciences.

Such disappointing data, on the national level, requires us to consider the education and teaching system as a whole. This includes the system's organization, allocation of resources, teaching methods, establishing the attitude towards learning, including institutionalized "sacred cows" such as integration, school discipline etc. Recently (summer 2003), the Minister of Education has created a committee defined as a "task force", in order to examine these issue and to submit recommendations for change. The recommendations of the Dovrat committee were submitted and were recently approved by the government (May 2004).

We must reintroduce excellence to the center of educational work, without hurting at all equal opportunity or the system's integrative structure. We can learn from traditional Jewish society, which has combined excellence and social cohesion within the community. There is no ready "off the shelf" recipe for achieving

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this combination of excellence and social cohesion in non-ultra-orthodox society, but it is possible. Proof of the possibility of this combination can be found in modern countries such as Finland, Korea, Singapore, etc. Using examples from other countries is embarrassing as in recent centuries it was the Jews who excelled in the fields of knowledge, sciences and arts, to the point where the people with which they have lived had set quotas (numerus clausus) for them.

The integration of Jerusalem's institutions of higher education, in the early stage of formal education, in the city and in its surrounding, could be a significant leveraging force in the improvement of education and preparation towards higher education.

Allegations are often made against the Hebrew University, claiming that it is "alienating itself from the city". Some accuse it of elitist arrogance, and some blame the distribution of campuses in the city's far away periphery (Ein-Karem and Mt. Scopus). There is little doubt that with correct guidance the university could have a significant magnetic value. It could assist in training student reserves from among the students attending the city, and students from surrounding towns. In recent years some openness is evident in the rigidity of the education frameworks. The Hebrew University has started entering the higher classes of high school education by integrating students in academic studies, for the purpose of acquiring credit points. The Open University does the same. Bezalel and Ruben College also cooperate with the formal education system, especially the secular/national religious system, and contribute to it. The "Belmonte" laboratories in Givat Ram have become a flagship and a brand name, with an international reputation for using the latest scientific knowledge and teaching it to the younger generation in all education sectors. The Botanical Garden works in a similar manner. The Zoo and the museums make the city's educational atmosphere richer and more tempting. It is recommended to use this momentum in regard to students from the periphery and the metropolitan area as well, in order to introduce them to the city's cultural treasures.

In the 60's the Boyar school has been established and developed in the city. This school, which is still operating today, trains excelling immigrant children from the nearby and far away periphery. It is a prestigious education institute which emphasizes achievements. A significant share of the academic elite of Israel's peripheral youth has received its education in the Boyar school.

With the great leap of higher education in the periphery, this is the time to expand Boyar's trend to a prestigious research university, such as that of Jerusalem. With the cooperation of the Council for Higher Education and the municipalities, the higher percentiles (5%) of 12 grade peripheral students should be distinguished. They will enjoy protective conditions which will lead them to choose prestigious fields of study and advanced degrees, as a prestigious research student reserve. The effort must be comprehensive and decisive. It will be enabled in part thanks to the existence of student dormitories in the city. The students will work in the tutorage project for their living, and will enjoy generous scholarships and loans by the government and private bodies, including the city's advanced industries, and these will become a grant if they will settle in the city.

The city's education quality, in pre-academic education and in higher education, are the safest and best guarantee that the trend will change, in the direction of positive,

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high quality immigration to Jerusalem. The institutions of higher education must give the city and its surrounding their good patronage, and must improve achievements which are in a decline on the overall national level.

9.6 Teacher Training Colleges and Seminars

The positioning of the teaching profession on the scale of required professions in Israel is low, and the wages are set accordingly. Various committees that have been established (Etzioni '78 and others) have not brought relief. An additional committee ("Assignment Power") to deal with the matter was recently established by the Minister of Education.

This is a very general, bird's eye view picture. It is actually in Jerusalem that in two of the three religious and Arab educational sectors that the teaching profession is situated much higher both in esteem and compensation in relation to the average income within the sector. In Jerusalem, 16.8% of employees work in the education system as opposed to the national average of 12.5%.

Ministers of Education Sarid and Livnat appointed a committee chaired by Professor Miriam Ben Peretz to "examine the qualifications of the teachers in Israel, in relation to changes over time." The committee submitted its recommendations in December 2001. It is not yet known what came of these recommendations; however we know that they were presented to the Dovrat Committee.

The report reveals that in Israel 1.8 million students are taught by 120 thousand teachers and nursery school instructors. The ratio of one teacher to every 15 students has been maintained for over 20 years. The rates of departure and retirement come to 5% a year (approximately 6,000 teachers) and therefore it is necessary for 8,000 students a year to begin studying instruction in seminars and colleges. Out of these, approximately 5000 will complete their studies and about another 1000 will receive teaching certificates for beyond elementary school education.

Out of the 32 thousand students from all sectors in colleges and seminars (statistics from 2001), over 5,000 students studied in Jerusalem – far above Jerusalem's portion in the total population. Among the recipients of university teaching certificates in the year 2000, 17% were certified in Jerusalem. In recent years, in the framework of discussions regarding certifying regional colleges to grant Master's degrees, colleges have been considered granting a M.Ed degree to teachers which also includes a teaching certification. The Ben Peretz Committee recommends this.

Among the recommendations of the committee, some appear to be pioneering:

- A. In special cases, weighing the possibility of **allowing (either temporarily or permanently) studies and the granting of a teaching certificate at an active academic institution not intended to train teachers**, but which is recognized by the MLG and which has produced at least three classes of graduates.

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- B. In special cases, **weighing the possibility of allowing B.A/B.Sc degrees to be granted** (with or without a teaching certificate) at an academic college for education according to the needs for higher education and of the educational system, and in accordance with professional, budget, and other criteria and the rules of responsibility determined amongst the Department of Education and the Committee for Planning and Budgeting (VTT). The union of teachers objects, of course, to this monopoly on qualifying teachers and refrained from recommending this option.

Other recommendations worth mentioning are:

- A. To check and map out institutions, **and even consider mergers between colleges**. It is doubtful whether this recommendation could be implemented in light of the structural makeup of teacher's colleges.
- B. To compare the studying and training demands in the orthodox sector with the governmental sector and institutions moving towards becoming more academic. In Jerusalem this is an essential move that could greatly increase the number of female academics among the orthodox female population.

It is not yet known if these recommendations have been accepted, however they approach directions that we considered important to recommend in Jerusalem. We are aware of the fact that the differences between sectors are substantial, however it is possible to find ways to cooperate for the sake of professional and pedagogical enrichment while simultaneously respecting and protecting the educational uniqueness of every sector. Jerusalem could become a leader in Israel for training to teach the "core program" (communal to all sectors) that the Ministry of Education has been dealing with for over a decade.

Despite the fact that there is no shortage of teachers in Israel, there is a constant shortage of math, English, computer, science, and technology teachers. Part of the shortage is "covered" by unauthorized teachers, and it is also partly covered by biology teachers who switch to teaching science and technology. According to the committee's estimation, the shortage stands at between 1,500 to 2,000 teachers in the aforementioned subjects. A possibility for magnetization of the educational system in Jerusalem has arisen, through cooperation between the educational system and the industry. Good teachers in the aforementioned subjects can be rewarded for teaching by, in addition to their educational occupations, working in Jerusalem's advanced industries and conversely, serious professionals in the industry could devote a (small) part of their time to instructing through the educational system.

Just as the planning committee recommends the development and cultivation of interdisciplinary and multidisciplinary studies, **it is appropriate to develop a model of a teacher employed by the industry and an industry employee serving as a teacher/mentor/counselor in schools in Jerusalem.** Colleges training instructors, advanced technological schools, Hadassah College and Hebrew University can all prepare a communal program for training industry employees to instruct in schools and accompany teachers who are experiencing work in the industry.

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Finally, it is worth paying attention to the combination of academic colleges with the university as a catalyst for improving the quality of teacher training.

9.7 Higher Education in the Fields of Culture and Art

An interesting pattern for versifying higher education in Israel and in Jerusalem was made by turning the Bezalel Academy of Art and Design and the Rubin Academy of Music into academies in the early 1970s.

Bezalel moved to Mount Scopus in the 1980s, leaving behind a large space in the center of Jerusalem.

Since the two academies had received such recognition, a number of superior high school institutions (schools) had grown and developed in Jerusalem, especially in the fields of film and theater. Due to their small size and absence of an academic program, they have not yet been recognized and it is doubtful whether they will be recognized at all. Most of them are located in the Talpiot industrial area and in the Morasha neighborhood.

These institutions are significant in the higher education landscape in the fields of Israeli culture and the arts, and have an international reputation (the Sam Spiegel Film and Television School and "Vema'aleh" Communications).

Discussions were held at the Jerusalem Municipality beginning in the mid-1990s in order to find a solution for appropriately housing these cultural institutions in the center of the city, and the possibility of returning Bezalel to its natural place in the center of the city was even discussed. All of this was part of a concentrated effort to increase activity and an active student life in the area. The discussion focused on the Menorah region. The planning team established for this purpose submitted a number of alternatives that were discussed by various senior administrators in the municipality, including the mayor. In a conclusive document (M1.03), Dr. D. Ronen and Mr. Z. Barkai (the advisors) wrote that "at the base of the father program, suggestions for developing and promoting art institutions in Jerusalem, especially in the center of the city and with an expansionist attitude – systematically, combining physical, human, financial, budget, and industrial components," models after similar centers that have been established worldwide (Lincoln, Pompidou, Barbican, etc.). The latest version that was submitted includes, in addition to the Menorah region, the AUI (Alliance Universelle Israelite) region and the former Carmieaux School.

The departing Bezalel president, Dr. Ran Spoznik, expressed great interest in and longing for a return to the center of the city as part of the philosophical – inspirational conception of the academy. Therefore, an urban financial plan to resurrect the city center encounters an academic plan to take advantage of the city center in order to enrich the studies at the institution.

The team of advisors did not deal with the programs of study or academic level and recognition, however, by creating common functions and concentrating the institutions into one complex, **basic conditions can be created for "coexistence,**

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separately" in the framework of "boutique colleges." There is a possibility of (trying to) subordinate these institutions, either partially or mostly, under one existing academic umbrella according to the example of the Bezalel Academy. In our estimation, this will not be easy.

From conversations with a few of the school principals, this is indeed the situation. **Unfortunately, the level of cooperation between the institutions is low.** The Bezalel Academy, despite being currently located on Mount Scopus, has not cooperated with the Hebrew University and vice versa, despite "excellent relations" between the two institutions according to their directors. A lack of cooperation also exists between the smaller institutions in the city, the "boutiques," and the Bezalel Academy. The most appropriate way may be to include these institutions, together with others in the city, in the framework of "the college accumulation" (see more information later). The location of the institutions in the center of the city may cause students to live in close proximity.

The plan submitted to the municipality by advisors Ronen, Barkai and others has not yet passed the point of no return. The idea to locate the Bezalel Academy and film school in the center of the city and in campus structures of "college boutiques" in close proximity to each other seems appropriate from every possible aspect. The outline plan may be especially helpful in **creating a significant concentration of cultural and artistic institutions (with or without academic recognition) in the city center.** The formation of larger conglomerates and cooperation between existing entities, according to the example of the Bezalel Academy, Music Academy, or Hadassah College, and/or any other alternative, may increase, expand, and bring academic recognition to institutions that are greatly recognized in their fields.

9.8 Higher Education for the Orthodox Sector

Higher education for the orthodox sector has been discussed in detail by Dr. Ishai Safrim in the higher education and industry chapter – "Brain Power." **It should be emphasized that there is no intention to develop higher education in this sector at the expense of and/or in place of the development of advanced yeshivas, which serve as the academic culture of the orthodox world.** The unique status of Jerusalem in the orthodox Jewish world deems it as the preferred center of this population, both from Israel and from overseas, for acquiring a religious education.

The discussion that we held dealt with examining the ability of higher education institutions in the city (both existing and new) to appropriately respond to the predicted needs.

Dr. Safrim estimated the number of students in yeshivas or kollels (table 8, following), since no statistics regarding this matter are published and the governmental office for religious affairs did not answer our request. Therefore the numbers should be treated as general indicators, but not precise statistics.

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Table 8 – Students in advanced yeshivas and kollels(1999) in the thousands.

| | |
|----------------------|-------------------|
| Jerusalem | Total 37 |
| In kollels | 22 |
| In advanced yeshivas | 15 |
| Bnei Brak | Total 10.5 |
| In kollels | 7.5 |
| In advanced yeshivas | 3.0 |

Orthodox girls in Jerusalem complete their education at Batei Ya'acov in a seminary framework in 13th and 14th grades (see the aforementioned section 9.6). The programs of studies do not lead to a degree or to academic credit. Some of the seminary graduates make a professional change in order to work in the hi-tech industry or service in secretarial-professional occupations.

A similar pattern is beginning to occur amongst men studying in yeshivas and advanced Judaic studies programs in Jerusalem as well. In addition to and alongside the unique, long term education to become a religious vessel, some men are completing their high school education and/or acquiring a profession (especially in the hi-tech industry) alongside their yeshiva and advanced Judaic studies programs.

Two independent procedures make professional training and higher education accessible to the orthodox sector:

- A. Professional and higher education in the hi-tech industry can be defined as white collar and/or apron.
- B. The financial distress of the orthodox sector in Jerusalem and Israel, as a result of the recession in the market. The new financial plan damages this population significantly, since it previously enjoyed generous budgets. The direct funding of yeshivas and advanced Judaic studies programs has been affected and may be affected further such that the number of years of education for males in the orthodox sector may decrease. The implementation of the Tal Report within the orthodox public may also cause a large portion of the students to try to combine religious studies with vocational training and/or higher education.

A closer examination of the financial plan that was approved in the Knesset reveals a regulation that is new to the orthodox public: yeshiva students 23 years of age and older can work and earn wages as long as they have completed their quota for hours of study at the yeshiva, which has been forbidden until now. This regulation was added to the "Tal Law" and enables yeshiva students to go on a "decisive year" at age 23, meaning a search for work and studies towards vocational training and integration into the productive world.

In order to enable males and females of the orthodox sector to work, conditions must be created without which higher education would not be planned. First of all, separation between males and females in the student audience must be created. Of course, studies cannot take place which might hurt the main beliefs of the faith. Such

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institutions have already been established and are operating in Jerusalem, both for vocational training and academic studies.

The Institute for Vocational Training for the Orthodox Sector provides mostly non-academic vocational training and completion of matriculation exams. Additional entities, such as the Joint and the employment office, take part in expanding the educational process for young orthodox people at productive places of work.

The leading institution in Jerusalem and Israel for providing an academic education to the orthodox is the higher school for technology (Lev Institute) at Bayit ve Gan, and its relatively new branch for girls (Tal Institute in Jerusalem and Lustig in Ramat Gan). From its inception, the Lev Institute was a national academic-religious entity wishing to provide a service to the orthodox public. During the successful years of the hi-tech industry, the institute received an incentive from the government to deepen the activity with the orthodox sector. The college greatly expanded the range of professions that it instructs and is slowly becoming a unique university of the orthodox sector, both for males and females. **The Lev Institute is willing to identify itself as such.** The college has developed greatly in the field of technological professions and in combining new areas. Recently, in cooperation with the Shaarei Tsedek Hospital, studies and training have begun for medical assisting professions.

In order to make the university an institution that appeals to all sectors, the university must add "soft" professions such as the humanities and social sciences which may, in future years, compete with additional academic centers in the country which have begun to compete over the slice of the orthodox population. There are institutions in a still "embryonic" state which are trying to establish colleges for orthodox women in conjunction with the Open University and Hadassah College.

Internationally, Jewish brain power is attributed to religious studies and in-depth study of Judaism. **We recommend examining the possibility of granting academic credit for studies in higher yeshivas to students continuing on to academic studies.** There is no doubt that yeshivas provide training in dialectic thought and great knowledge in the field of religious philosophy. It is appropriate that part of the time devoted to yeshiva studies and the resulting acquired knowledge should earn recognized academic credit (see Amiram Gonen's book about the orthodox in New York). Of all the institutions for higher education, Lev (and Tal) Colleges receive the greatest credit for occupying the orthodox population. Therefore an advanced technological school may respond to the need of the orthodox sector nationwide (if not worldwide), and the initial institution may move to the center of the country.

9.9 Higher Education for the Arab Sector

Studies show (see section 9.5) that over 50,000 students attend educational institutions belonging to the Arab sector in the city. Only 12.6% of them study in grades 10-12, as opposed to 31.7% in the public Jewish school sector. We don't have statistics regarding the number of those who complete their matriculation exams, however, in an equal slice of the Arab sector in Israel they are lower (Yediot Ahronot,

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25.8.03, pp. 14-15). Therefore the potential of students to continue to higher education from the Arab population in the city (today) is low. **Any future attempt to analyze the higher education in eastern Jerusalem depends on the state arrangements that will be made, if made at all, with the Palestinian Authority.**

Today the Al-Quds University operates in Jerusalem, with campuses scattered throughout the Palestinian Authority and Jerusalem. The statistics regarding the number of enrolled students are not controlled. According to the university's publications, there are approximately 6,000 students. Only a portion of the students are residents of Jerusalem. The university offers training in most professions and all fields of knowledge. The university also operates an open university, in which over 30,000 students are enrolled (according to its own publications). A very small number of students from east Jerusalem study at the Hebrew University. At the David Yelin and Hadassah Colleges, Arab students are enrolled but mostly in studies not leading towards a degree. At Ort College on Ammunition Hill approximately 600 students are enrolled in studies for technical professions, however due to its low level the college is about to close.

Socio-economic data regarding the Arab population indicates that at an initial stage, under calm conditions, there will be an upsurge of prestigious professional (non-academic) education on the path to real integration in higher education institutions. The establishment of a quality Arab institution for higher education in Jerusalem would be a great attraction to students, and not only students from Jerusalem.

The state of Israel cannot ignore the non-Jewish population in its anticipated scope in Jerusalem, and fail to provide it with institutions of higher education and vocational training that instruct in the Arabic language. Interesting and complex questions arise in this context, such as – will recognition of an Arab academic institution in the center of the city be by the Israeli Council for Higher Education, and will it be funded by the VTT, or by a foreign academic authority? It is interesting that Al-Quds University, mostly out of financial considerations, approached the Israeli Council for Higher Education in order to receive recognition. We assume that under peaceful conditions, greater numbers of Arab students from Jerusalem would study at academic institutions and other institutions of higher education in Israel.

We identified a lot of good will at the Hebrew University to cooperate with Al-Quds University, under peaceful conditions. Dr. Sari Nuseiba works at both and cooperates on the academic level, yet acts defiantly against the unification of the city, for example by mentioning that the university is "recognized" by the Office for Higher Education of the Palestinian Authority.

The described program should enable the establishment of a serious academic campus in the eastern part on the city, at the eastern gate. This could be enabled based on Al-Quds University, or in the framework of a new college. In either case, cooperation must be made with a recognized Israeli institution, such as the Hebrew University. Its acquired reputation would attribute academic prestige to the Arab academic institution. Of course, the language of instruction should be Arabic. Fruitful cooperation could be created between the Open University in Israel and the Open University of Al-Quds, certainly regarding issues that are not politically controversial.

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Any economic plan implemented, together with peace and the rehabilitation of the area will place a high priority on the establishment of an Arab academic institution in east Jerusalem, and not merely for financial reasons.

9.10 The Capital as a Catalyst for Developing Higher Education

The Jerusalem Basic Law (1980), which is declarative in character, contains one clause with operative meaning. Higher education and/or education, culture, and knowledge are not mentioned in the law. For many years Jerusalem's centrality in the field of higher education stood out thanks to the Hebrew University. In an age of expansion and development of colleges, no appropriate effort has been made to ensure the continuation of the city's centrality, even within the parameters of its existence as the capital.

The branding of Jerusalem as the capital requires, now and in the future, the development of education. Many bodies are united in the opinion that the College for National Security, which used to be located in the city, should be returned to Jerusalem as well as transferring the College for Command and Special Staff. An appropriate plot of land for this purpose has been located on Mount Scopus. In the long run, the transfer and concentration of the institutions onto one campus will save a great deal of money. The Ministry of Defense, however, is not willing to use its budget to invest in constructing a building. Bringing such institutions to the city at a stage when most of the officers are in the process of building a family and basing themselves financially may cause some of the officers to remain in Jerusalem. Another entity that has expressed interest in relocating to Jerusalem is the **Council for National Security**. This is mostly a civilian research institution, which prepares materials for cabinet members and decision makers in the capital. **Its placement in Jerusalem is both justifiable and required.**

In recent years schools of government have been developing and "blossoming" on university and academic college campuses outside of Jerusalem, such as in Herzlia and Netanya. The largest number of people employed in the public service exists in greater Jerusalem. About 12.7% of all employees in the city work in public service, as opposed to the national average of 5.5%. Another 16.8% of all employees in Jerusalem are employed by the education system, as opposed to the national average of 12.5%. While Jerusalem has been blessed with teachers' colleges for all sectors of the population, it falls behind in studies of policy, management, and government. A prestigious framework at the Hebrew University was recently established to enable a small number of research students (approximately 30) studying government for advanced degrees. **Large numbers of public workers from the public, municipal and third sectors that could have absorbed, studied, and enriched the public service in all its derivatives cannot do so. The reason for this is the lack of institutional study possibilities, whether at the Hebrew University or at one of the city's colleges. Some of the students approach branches of foreign institutions. We will not elaborate on this.**

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After the establishment of the Technological College in Jerusalem was approved the municipality made an effort, together with other entities, to build an academic college for public service employees. This has not yet taken place. The Branco Weiss Institute, operating in Jerusalem and in other fields, has shown interest recently. It took the initiative to build a "Founder's Forum" of the public service representatives in cooperation with the municipality and the Association for Promoting Human Resources, and to designate a plot of land in the Swedish village for the future college. There is another possibility, for example – integrating the college for public service employees into the framework of one of the academic colleges that are already active in the city. Hadassah College has shown interest in this, despite the fact that it deals academically mainly with the technological field. The preferred option would be for the college to be established under the sponsorship of the Hebrew University so that it could benefit from the university's prestige and quality of instruction in order to enrich the public service.

Despite the difficulty it places the city in with regards to resolution of the conflict, Jerusalem's acquired religious reputation deems it a city with global centrally equivalent (and greater) to centers such as New York, Rome, and Athens and is a global city.

In better days, the city's centrality in the conflict could turn it into a scientific-academic research source. There are few cities that have experience prolonged and violent struggles both for and within the city itself, such as Jerusalem. This reputation could turn the city into a global center for studying peace and conflict resolution. The Hebrew University could play a central role in this field, in light of its positive reputation worldwide.

The tourism industry has served as the city's main branch of export for several years. For example, the direct proceeds from the year 2000 came to 200 million dollars. The years of the intifada (since October 2000) have resulted in the decline of this industry all over the city and especially in east Jerusalem. Foreign tourism has decreased, since its peak year, by over 70%!

In the early 1990s, Jerusalem held a very central role in the international conference industry, and was one of the world leaders in this field. The security situation damaged the conference field very significantly as well.

Most of the tourism industry is in the Low Tech field. Therefore the qualifications demanded of tourism employees are mostly professional. The very competitive market of the hospitality industry, however, demands high levels of professional skill especially with regards to the management and marketing of leisure and hospitality culture.

We consider the current state of the branch to be limited in longevity until a real improvement in the city's security situation occurs. The tourism industry could serve as a bridge for cooperation with neighboring countries by marketing joint tourism packages in the region of ancient civilizations. A college for the study of tourism professions should be established in the center of the city, within close proximity of one of the hotel areas. This could be a "boutique college" with the potential to attract approximately 1000 students at the first stage and develop into a tourism school with

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an international reputation, such as those in Europe in which the language of instruction, at least for some of the professions, is English.

Hadassah College could easily sponsor the college. Some of the subjects could provide academic authorization and others could provide professional certificates, like others that already exist at the college.

In a chapter dealing with recommendations for allocating land within the city, we will suggest the section of Ammunition Hill that is close to road number 1 (close to hotels), or structures in the city center close to Hadassah College that are appropriate to house a college.

Thus, the status of a city as a capital has many faces. In order for all this to occur, it is essential that the Israeli government grant substantial (legal) and material (resources) expression to the centrality of the capital, including the field of higher education.

9.11 Summation of Findings

- A. **The level of education in Israel, in terms of years of study, is steadily increasing.** The many colleges that have opened have provided a response to the dramatic rise in the number of students.
- B. **The percentage of students pursuing advanced degrees in universities is rising more than the percentage of students pursuing a bachelor's degree and the percentage of population growth.** This trend will continue and will deepen. Master's and doctoral studies in Jerusalem are inferior to the number of students electing the exact sciences over humanities. In science and biology studies, the quantity of students is rising and ensures a reserve of researchers for biotechnological issues. The Hebrew University stands out as a superior research institution, and 20% of all master's students and 30% of all doctoral students in Israel study in Jerusalem.
- C. **The Arab and orthodox sectors have "discovered" higher education.** In the orthodox sector a foundation has been created for combining religious studies with vocational training, in various levels. We recognized that the higher school for technology could turn into the first orthodox university in Israel, someday.

With regard to the Arab population, the matter is complicated and dependent upon state arrangements. However, a unified city in a layout similar or identical to the current outline demands a solution for this sector. Al-Quds University appears to be able to provide an appropriate response to the Arab public. These trends could compensate Jerusalem from the moderation of the growing number of students in Israel. Institutions for vocational training may serve as a mediating variable towards full higher education.

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- D. **In Israel there is a decline in the quality of education in schools**, in relation to the policy of the O.E.C.D. With time, this is a trend that will damage the quality of higher education. We have identified potential in Jerusalem for assisting institutions of higher education in improving the situation.
- E. **Jerusalem has developed engineering studies in recent years**, especially at the bachelor degree level and in colleges that have been established as well as elite technology at the Hebrew University.
- F. **Jerusalem has an appropriate professional foundation to develop the arts** in the framework of the existing colleges (Bezalel and Rubin) and a corporation of "boutique colleges" (for film and theater), and can serve as a center of attraction for students in these fields. We find it appropriate to locate these institutions in the city center.
- G. **Higher education is one of Jerusalem's quality export branches**, since over 60% of the university students come from outside. In order to continue and deepen this trend, there is a need for a developed system of dormitories all over the city.
- H. **Jerusalem receives more than its share of overseas students.** In recent years, due to the circumstances, this trend has declined however there is a good chance of (greatly) increasing the number of students arriving from overseas.
- I. **The city receives more than its share of teacher training colleges, for all sectors.** This is a good foundation, according to the "Ben Peretz" recommendations, upon which to base a general college for the "soft" professions and improve the seminars of Beit Yaacov in order to grant a B.Ed degree.
- J. **The Hebrew University is perceived as an institution that is "recognized" with the city and is a strategic asset of both Jerusalem and Israel in the fields of research and higher education.**
- K. **We found a distinct connection between the character of the industries developing in Jerusalem and the number of students in those fields in higher education institutions.** The absence of an appropriate engineering faculty has negatively influenced the development of advanced industries from the previous wave. With the movement to biotechnological fields, Jerusalem (and the Hebrew University in particular) has an advantage. In Jerusalem, a good connection between academic institutions and the industry has not been made. In order to initiate cooperation, we suggest that a research institute bridge the gaps.
- L. **A trend of interdisciplinary and multidisciplinary programs between "soft" and "hard" subjects has been developing both in Israel and worldwide.** The possible expansion and range of opportunities in Jerusalem necessitates easy and available transportation to and between the campuses.

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- M. **Higher education is the key to social mobility**, as well as technological changes and economic prosperity. The chance of finding a profitable and prestigious job increases with education.
- N. **Jerusalem's advanced industries and their corresponding services may serve as a solution for populations that have thus far been excluded and improve the financial situation of the city.**
- O. The state of Israel and the city of Jerusalem have not properly taken advantage of the city's status as the capital for academic development, especially in the fields of government and tourism. The transferal of prestigious institutions (such as the College for National Security) may assist this goal. Needless to say, the Agricultural Department of the Hebrew University, located in Rehovot, should move to Jerusalem.
- P. **Preferred scholarships to students studying in Jerusalem**, such as the decision made in government (98-3913), should continue.

9.12 Alternatives in the Academic Field

Academic entities (Breitebert and others) dealing with the future of higher education in Israel, outline a number of scenarios including **a multi-campus university, an "accumulation" of colleges supported by the Committee for Planning and Budgeting (VTT) in order to improve the academic level of the colleges, or the establishment of new universities.** Britebert has identified a deterioration of the quality of the colleges, should they remain independent, as well as of the "accumulation" and supports transforming the colleges into branches of the main university. The university would send professors to the branch, and graduates of the branch could come to the university for advanced degrees. We will barely discuss the establishment of new universities, due to the objection of the Council for Higher Education and the VTT. Higher education institutions in Jerusalem and the Hebrew University in particular do not need to establish branches in the periphery, and this is even undesirable for the city. Accordingly, action can be taken in Jerusalem according to either one or a combination of the three alternatives:

9.12.1 The Hebrew University as a Multi-Campus University

In addition to the campuses currently in existence and in the framework of Britebert's and others' suggestions, **the Hebrew University will spread its sponsorship over academic colleges in the area.** It will assist them via quality professors and by arranging its quality laboratories, libraries, and **"academic accessories."** The possibility of opening up new fields of study in the humanities and social sciences will be considered at the existing colleges and/or by creating an additional college in the city center. At one of the colleges sponsored by the university and in coordination with other entities in the city, tourism studies will be established on a vocational and

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academic level. The additional language of instruction at the institution will be English.

Along with the Bezalel Academy, the university will sponsor the "boutique" film and acting colleges, which will be located in the city center and granted academic recognition. The move may deem the city a leader in the fields of visual and electronic communication, and film.

The Hebrew University's magnetic power and good reputation will be used in order to attract overseas and Israeli students to both the university and the colleges under its sponsorship. Based upon the existing colleges in the city, a school for government and public management (under the academic sponsorship of the university) will be established. Through cooperation with the colleges and advanced industries in the city, new fields of disciplinary and inter-disciplinary studies can be established. This will not be a simple configuration and will require compromises on the part of the university, which will fear a decrease in its academic level, and on the part of the colleges, which will fear for their independence and academic freedom in their fields. **The key is in the Hebrew University's hands, and it can decide whether it wants to promote or to dampen and prevent.** The process requires a clear policy, conceptual flexibility, determination, and cooperation between all entities.

9.12.2 An Accumulation of Colleges as a Balancing Force to the Hebrew University

This is an alternative proposed by the Council for Higher Education. Since higher education is one of the city's proud features, not all can be left to the consideration of the Hebrew University and/or colleges scattered around the city that do not accumulate a critical mass of students and good reputation, not to mention the older and larger colleges.

An aggregate of all or a majority of the colleges in the city will create a "student club" that comes close to or even exceeds the number of students beginning their bachelor's degree studies at the Hebrew University. This population needs to be taken out of the "underground" and transformed into a present force in the city. A public/academic figure of the first degree should be at the head of the accumulation of colleges, who will know how to bridge, bring closer, and accompany the development of an innovative and unique system in Israel. **In this manner the monopoly that the Hebrew University holds over all fields of education in the city will be voided.**

When the time comes to plan the described program, the Hebrew University may be found to be a research institution of the first degree both in Israel and worldwide, and by its side a sort of state university or city college (similar to the framework developed in the United States) will stand. The institution will act in parallel with the Hebrew University and grant bachelor's and master's degrees with an emphasis on practical fields such as management, education, social work, tourism, health professions, welfare, and engineering. The academic staff will be able to pursue research, however its main function at the institution will be instruction.

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9.12.3 The Establishment of New Universities

The attraction of a university is greater than that of a college. There were those among us who felt that the establishment of a number of new universities in the cities could increase Jerusalem's appeal and draw a greater number of Israeli and overseas (both Jewish and non-Jewish) students. It was suggested, for example, to establish an independent, multidisciplinary technological university.

In order for the institution to be able to stand on firm academic ground, the professors at the institution will conduct research as is fitting for a university. As a either a part of or separate entity from the university, a school for public and governmental management will be established which will open up fields of study essential for a capital city in which the central seat of power is located and in which most of the human resources are employed.

One of Jerusalem's untapped resources is the "brain power" of the Jewish nation in the Diaspora. Even though Jerusalem receives the most overseas students in Israel in the framework of the Hebrew University, reputable yeshivas in the orthodox sector and a small percentage at the Lev Institute and teachers' colleges, the numbers are still small. In recent years the numbers have declined. The suggestion is to establish a university in which the language of instruction would be English. This would make it easier for newcomers to be absorbed, and the institution's attraction would increase.

Additional suggestions for universities suiting the various sectors were analyzed, especially a university based upon the technology school (Lev Institute) for the orthodox sector and a university structure, based on Al-Quds University, for the Arab sector.

We took the Council for Higher Education's policy not to open new universities, especially those funded by the VTT into consideration. However, we believe that in relation to universities suiting the various sectors (such as the orthodox and Arab sectors), there is greater feasibility.

In conditions of peace and national security, perhaps the Jerusalem label will be taken advantage of in order to open private universities that are not funded by the VTT. The growth can stem from one or more of the colleges already existing in the city, or can be built anew entirely. This is a prolonged and expensive process, especially with regards to establishing a reputation, **yet it is possible.** In such a case, we recommend establishing a university centered on technological, disciplinary, and interdisciplinary studies, and a university for overseas students with an emphasis on Jewish students. The language of instruction at the university should be English.

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9.12.4 A Discussion of Academic Alternatives

Each one of the alternatives presented has advantages and limitations, however leaving the academic situation as it may be an obstacle to higher education in the city and to Jerusalem in general. We therefore did not present this as a possibility. The first alternative, of turning the Hebrew University into a multi-campus system, has obvious advantages in attracting a wide range of students due to its quality and excellence. Its accumulated reputation can be adopted by the institutions under its sponsorship.

The central limitation of this alternative lies within the prevention of free competition that it creates, alongside its own ability to improve quality. It would also come across difficulty if some or most of the institutions desired maintaining their independence.

The second alternative, of an accumulation of colleges, is infected with the "mirror syndrome" in relation to the first alternative. The Hebrew University would serve as a flagship heading the sciences. The "accumulation of colleges" that may develop into the "Capital University" (temporary name) would serve as one of the leaders in the country in terms of quality of instruction and range of academic subjects offered.

The third alternative, **of establishing new universities, runs the risk of the scattered effort syndrome.** In consideration of the Council for Higher Education's negative stance regarding this idea, it is not advisable to take any drastic measures. However, we believe that out of the third alternative, the possibility of building a university in Jerusalem for the orthodox sector based on the Lev Institute and with a range of academic subjects including the humanities and social sciences should be adopted.

The same goes for building a university based on Al-Quds University for the Arab sector, however this is conditional upon more complex issues due to political circumstances.

Whichever one of the alternatives is chosen, it must respond to the status of the city as a capital, the corporation and recognition of smaller ("boutique") colleges, and the expansion of academic subjects offered.

The priorities for the city center must be secured, and student dormitories and institutions must be established. A common condition to all the alternatives is the improvement of accessibility to all the campuses in the city.

Each of the alternatives should ensure cooperation with the advanced industries. The research institute could serve as a bridge between the academy and academic research for the purpose of initiating industry projects.

In conclusion, the alternative of building an additional research university (alternative C) in Jerusalem, excluding the universities geared towards certain sectors, is barely feasible considering the time frame of the outlined project.

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Therefore, the decision should be between alternatives A and B and a combination of both.

9.13 Possibilities for Spreading the Institutions and Allocating Land

The Israeli legislative system, especially according to the Law of Planning and Construction (1965), necessitates the allocation of territories for the purpose of establishing educational institutions; however this includes nursery schools and regular schools up until grade 12. The communications of the chairman of the Ministry of Education on this matter are based on the Obligatory Education Law (1949) and the National Education Law (1953). In "the planning instructions for allocating land for public use" (of the Construction and Housing, Interior, Treasury, Education, Culture, and Sport Ministries, 2000), we found no mention of the need to allocate land for institutions of higher education.

In light of the developments that were surveyed and the expected trends for the next few decades in the city, **it is essential that allocation of land for public institutions will include property intended for higher education** (apart from lands which necessitate high payments) according to clause 197 of the law.

Unlike in educational institutions for younger age groups, it is essential that areas intended for institutions of higher learning are spread over the central areas of the city and that good access to them via transportation is ensured.

The Hebrew University received appropriate land all over the city, especially for its central campuses. Together with reform in the building codes regarding height, the university will enjoy even larger building reserves.

We have already determined that in terms of territory the Hebrew University will not suffer any shortage in the near future, therefore the decision regarding the concentration of campuses is significant and the solution may lie within the realm of transportation and accessibility. The picture alters if the decision is made to transfer the Department of Agriculture from Rehovot. Due to the areas necessary for processing and laboratories, special allotments would be necessary.

When dealing with Jerusalem, it is essential to plan student dormitories in the city as an integral part of the institutions. They improve the potential of these institutions to attract students from all over the country and from overseas, and with time they also improve the likelihood of students settling down and living in the city. Dormitories may serve as Jerusalem's additional factor in attracting students. **Their location in the city center is significant.**

In discussing education in the orthodox sector, we dealt with creating opportunities for vocational, professional, and academic training as a response to trends in this sector.

Studies in yeshivas and advanced Judaic studies programs will continue to serve as the core higher education for the orthodox in the foreseeable future. Its placement in

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the inner circle, closer to the orthodox community, should be ensured. **However, since the supply of land is limited it would not be possible within the outline plan framework to designate land. It is therefore recommended to significantly increase the density of building.**

When we dealt with academic subjects we discussed the possibility of relocating cultural institutions in the city center, both in order to enhance their functioning and as a preferred location. The Menorah region, together with the traditional areas of the Bezalel Academy and until the market and Carmieaux region, would provide an appropriate area for higher education in the fields of culture and the plastic arts, as well as film, photography and theater schools. Additionally, the Menorah region would turn into the city's artistic center with great attraction for tourists and young people.

Hadassah College, located in the center of the city, is experiencing a drive of development and is in the process of expanding its academic recognition. It needs additional space. A partial solution could be found by significantly increasing the percentage of constructed area, while considering the placement of the college. The Ort-Nevi'im region close by should be designated to the college.

An analysis of the change in the number of students enrolled in formal education in the city was made in the chapter dealing with the magnetization of higher education. In educational institutions in the city's inner ring, the number of students is dwindling and some institutions are about to close. The municipal educational system has been deliberating for years regarding how to limit the number of schools in the city center. For example, the Denmark School is located close to an impoverished neighborhood in south Jerusalem. This is a large campus (approximately 20 dunam), which continually loses students. The overall plan designates an increased development of the neighborhoods in the southern part of the city. With proper planning the high school could be preserved with the possibility of establishing an academic college. A college for public service employees in the fields of government and management could be an appropriate solution for improving the area. Regarding additional schools in the area, detailed examination is required and it may be possible to create combinations that would allow partial population by branches of the city's colleges.

The lower eastern parts of Ammunition Hill should be designated for academic education, and the area is especially appropriate for housing a hostel for tourism, Israel, and Jerusalem studies as well as certification studies for tour guides and such. There is good accessibility to the area, and it will improve with the paving of the first express train line.

In the next few years, higher education amongst the orthodox population may develop significantly. It is necessary to allocate areas that could serve as a gathering of orthodox institutions for higher and vocational training, with a clear gender division. In any event, the areas designated for orthodox higher education should be close to (however not directly within) the residential area of this community. They should be set apart from yeshivas, which are usually placed inside the residential area of the community.

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Allocation of land for higher education must include the eastern part of the city, in order to fulfill the needs of the non-Jewish population. Al-Quds University is spread over campuses within the Palestinian Authority and Jerusalem. Today the number of students from this population is low. There is a high probability of a significant increase in the number of students over the next decade. Any prediction regarding this field is problematic since the central variable, the political situation, is uncertain. The eastern gate region could suit the placement of a higher education institution for the non-Jewish population, in conditions of peace.

Students from the orthodox and non-Jewish sectors may elect technical-professional or other studies that do not provide an academic degree, but which do enable good accessibility to the industry and productive sectors, like a sort of sophisticated community college. Hadassah College does this most optimally within the city. The orthodox sector is already "signaling" to institutions such as the Institute for Professional Change for the orthodox, and with great success. The financial conditions may increase the demand for higher level vocational training institutions. In the non-Jewish sector as well, it is expected that some of the students will approach institutions that can provide them with respectable professions enabling employment in the market, over degrees. For example, the college on the campus of the Abdullah Abu Hussein School is about to be closed. Even if this institution locks its gates, it is essential for both sectors that public land or existing structures are allocating for the purpose of establishing vocational training institutions.

The policy document shows that the issue of land for higher education in Jerusalem is not the critical variable and does not jeopardize the development of higher education in the next few decades, as long as the policy for allocating lands for public structures is applied towards higher education for all three sectors. Advanced yeshivas are included in the framework of this policy.

9.14 Summary: Higher Education as an Archimedean Point for Jerusalem's Prosperity

Jerusalem enjoys a long historical reputation and proven experience over the past few generations in being a significant center of education on a national and international scale. Paradoxically, this reputation was earned due to traditional Jewish studies over the years. To the credit of the Hebrew University, we should note that it was a pioneer in determining the academic level of excellence, a landmark in the renewal of the Jewish people in their nation, and simultaneously, assisted the development of higher education in Israel by cooperating with and assisting the development of research universities that have been established.

Over the last decade of the past century, a real change has taken place in the realm of Israeli higher education. Israel has been enriched with academic colleges, many of which offered the "soft" subjects and brought higher education to the periphery. This process, which grew and increased, decreased the number of students enrolling at the Hebrew University for bachelor's degrees. Therefore it should be noted that the development of other research universities and the open university have decreased the number of students coming to study in Jerusalem, particularly for advanced degrees.

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Jerusalem still maintains its leadership in the number of students pursuing advanced degrees in Israel.

The big challenge for the Hebrew University, which faces the entire city as well, is to ensure the quality of education and excellence of research, and universal access to academic, non-research institutions.

The method suggested by the planning team is a compromise. A combination of the alternatives that we suggested may provide more fruitful results, as combined layers for the development of education.

A move like this could occur by spreading the Hebrew University's sponsorship over any institutions that should so desire. The colleges which join this effort will be enriched, their attraction will increase, and their graduates will help fund the university's research students. It is essential that this kind of sponsorship would ensure the development of colleges in the "soft" subjects, beginning with a school for government which is necessary in Jerusalem. The transferal of the College for National Security and the College for Management nearby is an essential level of the process. The transferal of the Agricultural Department may ease the possibility of interdisciplinary studies.

An additional method is for institutions that wish to retain their independence to form an "accumulation" of colleges in the city, in a non-demanding organizational framework that would enable voluntary cooperation and the advancement of higher education in Jerusalem. Via this accumulation of colleges, existing schools and "boutique" colleges that have not yet been recognized may earn academic recognition. An academic/public figure of the first degree should stand at the head of this accumulation of colleges in order to lead the way. The next few years, especially in light of the economic situation in Israel, will lessen the growth of new institutions and the rise in the number of students. Jerusalem has real potential, especially during a period of stagnation, to greatly increase its number of students since two entire populations are in the early stages of flowing towards academic tracks – the orthodox and the Arabs.

With regard to the orthodox population, we suggested two solutions under the assumption that even in the next generation religious studies will serve a central role. Institutes for professional training that have begun to develop provide vocational training alongside religious education for males (students at yeshivas and advanced Judaic studies programs) and females (seminary students) separately. Additionally, higher schools for technology are developing (Lev Institute for males and Tal Institute for females) into an entity that could serve as the head of a university geared towards the orthodox-national and orthodox sectors. If the institute should develop the instruction of "soft" subjects, it could successfully compete with other institutions that are developing in the center of Israel.

The solutions for the Arab population, which is becoming exposed to technological professions and higher education, is more complex since it is dependent upon political arrangements. We will satisfy ourselves with the determination that a united city demands a solution for this population. It could be through the unification and development of Al-Quds University or in alternative solutions that the state

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establishes at higher education institutions in Israel in general, and particularly in Jerusalem.

Despite our skepticism regarding the possibility of opening a research university, in light of the policy of the Council for Higher Education it appears as though both institutions have a chance of earning this recognition and were meant to serve the orthodox and Arab populations separately.

In relation to the general student population, the Hebrew University must develop multi and inter-disciplinary studies in addition to its quality and excellence in the fields of study and research, since this is a factor that could increase the city's attraction. New transportation solutions both to this city and within it (the train) must take into account the need for accessibility to and in between the academic campuses (see the chapter on transportation). **The research institute that was recommended** is intended to take advantage of academic sources of knowledge and combine them with entrepreneurial initiatives and projects from the industry. The easy and accessible exchange of knowledge can only improve both higher education and the industry.

Jerusalem must focus on bringing Jewish students from all over the world for the purposes of study. The Hebrew University is the most appealing, however the higher school for technology at Jerusalem College is attractive as well and additional appeals could be developed in the fields, of culture, the arts, music, and communications.

Jerusalem has been blessed with a large number of student dormitories. Discussions are being held regarding establishing additional dorms through the B.O.T. method. Appropriate dormitories for students arriving from throughout the country and from overseas are the guarantee for maintaining the city's appeal. In developing academic campuses and creating residential opportunities for students in the city, we already suggested **encouraging studies and student life in the city center.**

A critical component to all of this is the political and security situation of the city.

Finally, the more higher education in Jerusalem develops in new directions and expands to reach sectors that have not yet fully assimilated into this field, the better the financial situation, employment, migration to and attraction of the city will be. In other words, **the planning team views higher education in the city as an Archimedean point for Jerusalem's development and prosperity.**