

**KNOWLEDGE IDEALS AND UNIVERSITY ARCHITECTURE:
A PICTORIAL AND SOCIO-CULTURAL STUDY OF THE
ARCHITECTURE OF TWO INDIAN UNIVERSITIES**

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partial fulfillment of the degree of**

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CERTIFICATE

Certified that the dissertation entitled, '**Knowledge Ideals and University Architecture: A Pictorial and Socio-Cultural Study of the Architecture of Two Indian Universities**', submitted by me in partial fulfillment of the requirements for the award of the degree of **Master of Philosophy (History of Education)** has not been previously submitted for any other degree of this or any other university and is my own work.

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To my late Father

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CHAPTER I

INTRODUCTION

1.1 Purpose of the Study

The study attempts to understand the relationship between the ideals of knowledge and university architecture, and explores the relationship between models and ideals of education and the plan and architecture of the university. In order to do so it examines the interdependence of the quality of the campus environment (physical facilities), the quality of the educational experience. The quality of academic content is normally considered to be of primary importance. But it is contended that this is dependent upon the quality of social life and the work-study environment of a university campus.

Difficulties arise from a limited appreciation of the goals of the university. Those charged with the responsibility of campus development need to appreciate about the objectives of the institution in relation to society's needs and then adopt an appropriate procedure to achieve the stated objective. A major obstacle comes from a lack of understanding at higher administrative levels that the new universities being established in India are institutions of strategic importance to the future development of the country. In the rapidly changing contemporary world, universities are undergoing profound changes in their scopes, functions and organization and are in the process of rapid evolution. Their tasks are no

longer confined to the two traditional functions of teaching and advancing the frontiers of knowledge. Potentially, a university campus environment is a model community, where the emphasis is not merely upon the pursuit of knowledge, but is a location for the evolution of the culture of a student during her or his most impressionable years, the first stage in the lifelong task of self-education.

1.2 Nature and Function of University

In order to understand the relationship between the ideals of knowledge and university architecture, it is worthwhile to recapitulate the nature and functions of the university. What is expected of the university comes from an understanding of what it is, what it does, and its relationship with society of which it is a part. There is a difference of opinion among scholars from different parts of the world and across historical time concerning the nature and role of the university. These differences arise from the variety of cultural contexts within which the university is embedded as well as the historical evolution of the university over the centuries. Despite the variety, universities share much in common and their development is dependent upon the social-political context within which they are embedded. The differences reside not so much in the essentials as in the degree of emphasis accorded to certain functions depending

upon both the time and place. "The university is anchored in the nation and shapes and is shaped by the nation in which it is established".¹

Etymologically, the university conveys a sense of the universe as an "entire", "whole", the world of experience. "The university is an institution which transcends time and geography".² Philosophically, the university comprises a community of scholars engaged in learning and the pursuit of truth.³ Academically, the definition of "University" admits of variations according to continental/regional emphases on particular structures and functions. As far as England was concerned the university was a collection of colleges with a premium on teaching. The German university emphasizes specialized, professional, and graduate studies with an emphasis on research. The American university incorporated undergraduate teaching along with graduate studies and extended the university's tasks to include social service.⁴

The explosive growth of knowledge from the seventeenth century onwards led to disciplinary specialization. As a result universities began to focus upon liberal education, general education, and interdisciplinary studies. These together became central concerns of the university. As traditions of research developed within the university, postgraduate, regional, and international studies acquired

¹ Resposo, Epifania R. Castro. 1971. *The Role of Universities in the Developing Philippines*; Asia Publishing House: New York. ; pp.40-41

² Barzun, Jacques. 1968. *The American University*; Harper and Row: New York. p. x

³ World Student Christian Federation: Report of an Asian University Teacher's Consultation, 1951; *The Idea of a Responsible University in Asia Today*, The Federation: Geneva, 1952 p. 69

⁴ Clark, Kerr. 1964, *The Use of the University*, Harvard University Press, Cambridge; UK. p.18

an increasingly important place in the life of the university. Thus, the new map of knowledge reconciled the intellectual with the residential aspect of life; the contemplative way with that of an active life.⁵

A review of the literature on higher education reveals that there is a confluence of thinking on the basic functions of the university. Some of the classic works on the subject are John Henry Cardinal Newman's The Idea of a University (Newman; 1927), Abraham Flexner's Universities: American, English, German (Flexner; 1930), Jose Ortega Y Gasset's Mission of the University (Gasset 1944) and Karl Jaspers's The Idea of the University (Jaspers; 1959)

Newman focuses on the cultivation of the mind. He reasons that when the intellect is properly trained, it will have the power of viewing many things at once as a whole, of referring them severally to their true place in the universal system, of understanding their respective values and determining their mutual dependence. He sees the university, then as a place of disseminating universal knowledge, the object of which is intellectual, enhancing the intellectual capabilities of students and making them active members of society. The premise is that the cultivation of the mind enables men to serve their fellowmen and society more ably. Flexner's exposition of the modern university highlights four major aspects: (1) the conservation of knowledge and ideas, (2) the interpretation of knowledge and ideas, (3) the search for truth, and (4) the training of students

⁵ UNESCO, 1966; *World Survey of Education-iv-Higher Education*; The Organization, Paris pp. 87-96

who will imbibe these values and ideas and transmit them to the next generation. He argues that the teaching function of the university involves both conservation and interpretation, but the primary emphasis is on research and the advancement of knowledge.⁶ Gasset's characterization of the mission of the university stresses university teaching which, he claims, is comprised of three functions: (1) transmission of culture, which includes the vital system of ideas of a period; (2) training in the professions (3) scientific research, together with the training of new scientists.⁷ Jaspers considers the university as a community of scholars and students engaged in the task of seeking the truth. Thus, referring to the objectives of the university he says that the university is dedicated to the pursuit of science and scholarship. Research and teaching seek to contribute to the intellectual culture as a way in which truth becomes meaningful and manifest. The task of the university may therefore be considered as involving research and the transmission of learning, education, and culture.⁸ For Cyril James the functions of the university: includes teaching, conserving the existing body of knowledge or reinterpretation; and research, or discovery of new knowledge. He further states that every university in every country of the world admits its responsibility for the discharge of all three functions despite differences in age or academic

⁶ Flexner, Abraham. 1930; *The Idea of a Modern University*, University: American, English, German; Oxford University Press, London. pp.1-24

⁷ Gasset, Jose Ortega Y. 1944, *Mission of the University*, Princeton University Press, Princeton p.62

⁸ Jaspers, Karl. 1959; *The Idea of the University*, Peter Owen; London.p.51

structure, and the political philosophy of the country in which it operates.⁹ Walter Moberly speaks of the philosophical foundations of the university corresponding to three different stages in the development of the university. Firstly, the Christian Hellenic view prescribes mental development for its own sake, meaning education in general is considered to be of value as opposed to specialized learning. Secondly, the liberal view emphasizes investigation more than it does pure instruction. Thirdly, the techno-democratic view, predominantly practical and utilitarian, is deliberately selective of the fields which promise practical results.¹⁰

1.3 Thinking about the Modern University in India

Among the prominent Indian educationists, philosophers, intellectuals and statesmen who have thought about the university are, Rabindranath Tagore, S. Radhakrishnan, Zakir Husain and Pandit Jawaharlal Nehru.

Tagore's thought has a living relationship with the university which he established at Santiniketan called Viswa-Bharati that signifies a place of universal knowledge and world culture. The thought that led Tagore to the founding and establishment of Viswa-Bharati is best explicated in Tagore's own words: "I had all along experienced the want of an institution in India which should be a true

⁹ James, Cyril. 1967 quoted in UNESCO and IAU, *Higher Education and Development in South-East Asia*, Belgium, pp.495-96

¹⁰ Moberly, Walter. 1953: *The Crisis in the University*, SCM Press Ltd. London: pp 30-31.

centre for all the different Eastern cultures, concentrating in one spot the varied ideals of art and civilization which have been contributed to the world by the various countries of Asia."¹¹

The great lacunae in Indian education Rabindranath Tagore's words:

"we have lost in India, the creative mind; we have been satisfied with second hand knowledge and inferior imitative work".¹²

Therefore, Tagore was particular about developing:

"a scheme of education which would enable the mind of India to find out truth, give expression to it in such a manner as only it can do. His ideas were to bring the scattered minds of India into coordinated activity, so that education can become not only receptive but creative as well. Further, the primary function of a university, according to Tagore should be the constructive work of knowledge-bringing them together and giving them full scope for their work of intellectual exploration and creation. He felt that India should be a true home for such a culture".¹³

Viswa-Bharati was thus conceived as a place for the meeting of East and West 'in a common fellowship of learning and a common spiritual striving for the unity of the human race.'¹⁴ And therefore, the poet-educationist feels: ¹⁵

"The mystic consciousness of the infinite, which she (East) brought with her was greatly needed by the man of the West to give him is balance. On the other hand, the East must find her own balance in Science-the magnificent gift that the West can bring to her."

¹¹ Tagore, R. & Andrews, G.A. 1923 *The Viswa-Bharati* Natesan and Co. p.7

¹² Ibid, p.89

¹³ Mani, R. S.1964, *Educational Ideas and Ideals of Gandhi and Tagore*, New Book Society of India, New Delhi

¹⁴ Tagore, R. & Andrews, G.A. 1923 *The Viswa-Bharati* Natesan and Co. p.13

¹⁵ Tagore, Rabindranath, 1950, *Creative Unity*, Macmillan and Co .Ltd., London. p 111

According to Tagore, the first step in the realization of such a unity was to create opportunities for revealing different peoples to one another. A meeting-ground was to be found where there would be no conflicting interests. One such place would be the university, "where we can work together in a common pursuit of truth, share together our common heritage, and realize that artists in all parts of the world have created forms of beauty, scientists discovered secrets of the universe, philosophers solved the existences, saints made the truth of the spiritual world organic in their own lives, not merely for some particular race to which they belonged but for all mankind"¹⁶

Viswa-Bharati for Tagore then had the following features:¹⁷

"Being strongly impressed with the need and the responsibility, which every individual today must realize according to his power, I have formed the nucleus of an international university in India, as one of the best means of promoting mutual understanding between the East and West. This institution, according to the plan I have in mind, will invite students from the West to study the different systems of Indian philosophy, literature, art and music in their proper environment, encouraging them to carry on research work in collaboration with the scholars already engaged in this task."

Further, it was Tagore's ambition that the East should be completely revealed to the West and for the completion of that illumination there will be a need, "for the

¹⁶ Ibid,p.172

¹⁷ Ibid,pp.172-73

East to collect its own scattered lamps and offer them to the enlightenment of the world."¹⁸

Marjorie Sykes has pointed out that Viswa-Bharati could, in conformity with Tagore's vision, be thought as developing in three concentric circles:

"The innermost circle is the circle of India....The second circle is the circle of AsiaThe third circle is the world circle which includes along with Asia the civilization of the West of Europe and America."¹⁹

Tagore expressed his deep regard for nature in a number of ways at Viswa-Bharati where life was lived by all in vital harmony with all creation. 'The poet's own fundamental thought, both of religion and education alike, implies essentially a life lived in harmony with nature, not a life cut off from the heart of nature by artificial barriers of man's devising'. Education at Viswa-Bharati was not confined to text-books, blackboards and examinations. But something imbibed 'within the lap of nature herself, beneath the shade of over-hanging trees and under the open sky, at the festival of the full moon and through the music that ushers in the coming of the rains. On every side and by every means the teaching given in the Ashram is kept in union with God's marvelous creation, in the midst of which we have our own place and function as well as other creatures. This implies a growth of intimate relationship with all that lives and moves around us. It means also tenderness towards those creatures which live their life side by side

¹⁸ Ibid,p.174

¹⁹ Sykes, Majorie;1947, *Rabindranath Tagore*, Longmans Green and Co. pp.8-11

with us in our surroundings. It is not too much to say that, apart from this vital harmony with all creation, the teaching given in Viswa-Bharati cannot fulfill its special object of bringing man himself into harmony with man'.²⁰ Thus Viswa-Bharati was a place 'Where the whole world meets in one nest.' And this university represented India whose wealth of the mind was available to all: 'Viswa-Bharati acknowledges India's obligation to offer to others the hospitality of her best culture and India's right to accept from others their best.'²¹

The philosopher S. Radhakrishnan's views on the role and functions of universities require attention. He headed one of the most important universities of modern India namely the Banaras Hindu University, prior to his assuming the office of the President of India. When he spoke of the university, he did so with his personal knowledge and authority..What is the nature and task of the universities:²²

" If the universities are unable to give the students a proper sense of values, a sense of inward restraint and an attitude of setting differences by agreement, if they cannot train their students to behave decently, they have failed in their main function. We may become clever, and efficient, informed and skilled, but we should be able to control ourselves. The swift decline in student behavior has dangerous consequences to society.....Education, if it is not education in depth, in self-discipline, is wasted labour".

²⁰ Dutta, K. & Robinson, A. 1995, *Rabindranath Tagore- The Myriad -Minded Man*. Bloomsbury, London. pp 40-41

²¹ Ibid. p. 220

²² Radhakrishnan, S. *Occasional Speeches and Writings*, Second Series. Publication Division, GOI. p. 345.

How does the distinguished educationist define a 'University'? "A university", he says, "is not a mere information shop. It is a place where man's intellect, will and emotions are disciplined. In it experience and adventure are combined... A university man should be unattached without being unconcerned, unambitious without being indolent, warm-hearted without being sentimental."²³ Universities were places where the true spirit of democracy was developed along with the ability to appreciate other points of view, and to tolerate differences in debate. Universities were places to reflect upon, 'the struggles of the past and realize the perils and possibilities, the challenges and opportunities of the present'.

To him universities have a supreme function in the advancement of international understanding and international peace, a location for the development of a new way of thinking and feeling. At an address delivered at the Charles University of Prague, said:²⁴

"Considering the size of the country and the programs of reconstruction it wishes to implement, we are sending our students abroad for training in subjects for which adequate facilities are not available in our country. Even when our universities become developed, contacts with other countries and their universities will not stop; for it is the function of universities to foster a sense of world community".

²³ Ibid. p.160

²⁴ Ibid. p.120

As a philosopher Radhakrishnan pushes the agenda of the university even further:²⁵

“In the physical sense of the term, we belong to our age but as university men we escape from the trammels of our age and nation and become, in the true sense of the word, contemporaries of all ages. Reverence for the great minds of the past and the expansion of the future bounds of knowledge are the prerogatives of a university”.

In addition, the university was the location for breeding fellowship that transcended the barriers of “race and nation, of clan and creed and honors the achievements in art and literature, science and scholarship of a variety of peoples”. In other words it was a location that exemplified the fraternity amongst human beings. ²⁶

What constituted the soul of a university? He did not believe that mere buildings, however well-equipped made a university. What constitutes the real soul of a university, in his opinion is ‘the teachers and the pupils and their pursuit of knowledge’. The university was the “the sanctuary of the intellectual life of a country”. If the vitality of national life resided among the people, then the people were well-springs of national awakening. The role of education then is to stimulate debate and discussion from first principles. The educated youth will voice their opinions and dissent on the current state of things. “We train in this

²⁵ Ibid. p.123

²⁶ Ibid. p.124

university not only doctors and engineers but also men and women who think for themselves".²⁷

In an address delivered at Moscow University he remarked that that the role of the university was "to prepare the mind of the world for the establishment of a world community with a common consciousness and common conscience. his remarks follow". The remarks acquired salience in a world torn apart by two world wars and the divide by the iron curtain. The fostering of a world community and common conscience required a commitment as to a faith.²⁸ Similarly at the Convocation Address delivered at the Centenary of Madras University he reiterated the point:²⁹

"In this unquiet modern world which science and technology have compressed into a single neighborhood, this university and others, by their united efforts may further the cause of peace and understanding. A university is a fellowship, devout in its admiration of what has been achieved in the past, yet believing in the richness of the future which lies before us all, a fellowship which transcends all barriers of race and nation, of class and creed and yet honors the artistic and intellectual traditions of a variety of peoples. The scholars and scientists are not always immune to the political passions which infect their countries. But in the pursuit of knowledge they, with their austerity and detachment, can rise above them and see in their political enemy their professional colleague. In the universities at least we must be able to lift our gaze above national interests and breathe the pure air of disinterested inquiry". (emphasis added)

²⁷ Ibid. p.126

²⁸ Ibid. p.132

²⁹ Ibid. pp.205-206

In other words, he pointed out that while it was sadly in the order of things that both scholars and scientists were suspect in the face of nationalist persuasion, the commitment to the robust ideals of knowledge would overcome the challenge politics both for the pursuit of knowledge and the international community. This predisposition to an ideal of knowledge that transcended the barriers of race and nation forms the core of Radhakrishnan's definition of the 'University':

'A university by its very definition has a universal outlook. For it nothing human is alien. Its function is to develop a world community. This service helps people in different parts of the world to understand one another'.³⁰

The conception of the university as a site for imparting this transcendental conception of knowledge is reaffirmed in a Convocation Address delivered at Gujarat University. He argued that the university was not just a place for imparting information and knowledge but cultivating the spirit of dedication and detachment, qualities that were essential in the making of the nation. The university was the institution where the individual had to be developed fresh. It was not a place where learning by rote was emphasized but where it would be possible to cultivate a:³¹

"...a refinement of feeling, a civilizing of their purposes, a ripening of their understanding, both of nature and of society? That is the supreme test of the functioning of any university."

³⁰ Radhakrishnan, S. *Occasional Speeches and Writings*, First Series. Publication Division, GOI. p.178

³¹ *Ibid.* p.169

One of the roles of all universities was to try to integrate the individual and the society—through advancing knowledge and communicating it to others. The principal function it could be said was “to foster world loyalties, a sense of moral values and faith in the human spirit, ideals which are shared by the universities of the East and the West”.³² The university was a place for fostering a conception of knowledge that was untrammelled by cultural and social prejudices. This optic enabled us to see below the colour of the skin, beyond vanities and egotism, prejudices and narrow royalties³³. The point was made at a function organized in honour of the visit of the American President Dwight Eisenhower at Delhi University. As he would eloquently proclaim: “A university, as its very name signifies, is a symbol of the University of Spirit.”

Like Tagore and Radhakrishnan, Dr. Zakir Husain is another distinguished educationist and thinker about the university. The two main objectives of higher education, as Anees Chisti has identified in Husain’s thought, are:³⁴ (i) the principle of work, and (ii) social orientation. Their relevance is marked if they are not exclusively to be applied to higher education alone. They should, in fact, permeate all levels of education. “It may appear odd to the university men to have to share any principles with the elementary schools, but I do not believe in

³² Ibid. p.103

³³ Radhakrishnan, S. *Occasional Speeches and Writings*, Third Series. Publication Division, GOI, p.88.

³⁴ Chisti, Anees. 1967, *President Zakir Hussain: A Study*, Rachna Prakashan, New Delhi. P.58

caste distinctions"³⁵, Husain says. Education should be "productive" not only at the elementary stage but at the level of higher education as well. According to Husain:

"Educationally productive work initiates new ideas or makes possible new combinations of ideas already present with a view to reach a higher unity of mental life or a higher development of the capacity to express or realize them."³⁶

To achieve this goal it is necessary to establish a proper rapport between society and the universities. The barriers separating the life of people and the universities, "the acquisition of scientific and technical knowledge and its utilization" would need to be dismantled. A pre-condition for accomplishing this task would be to correct a "one-sided intellectuality and systematic exercise" and promote "the social urges inherent in the young", which would entail the promotion of growth "...in the service of others and in mutually shared work"³⁷.

This is further elaborated:³⁸

"Universities are supposed to be institutions for the education and training of intellectual workers in a society based on the division of functions. They are supposed to be socially necessary establishments for workers whose effectiveness in their professional work presupposes a thorough and systematic intellectual training".

The emphasis on social orientation poses certain problems, especially that of conflict between freedom and authority. Evidently, in Husain's view such a

³⁵ Zakir Hussain, Convocation Address, Lucknow University (January 28, 1958), contained in *The Dynamic University*, p.10.

³⁶ Ibid. p.11

³⁷ Ibid. pp.16-17

³⁸ Zakir Hussain, Convocation Address, University of Calcutta, (Dec.20, 1959), contained in *The Dynamic University*, p.23.

conflict does not exist, since freedom and authority are not viewed as anti-thetical to each other:

“There is no authority in education, especially in the education of adult grown up students, which does not presuppose an inner freedom that recognizes it voluntarily and there is no freedom without some regulation and order which is accepted as authoritative.”³⁹

Husain indicated that the autonomy of the university was “...considered almost sacred in all civilized societies”. Nothing less than absolute autonomy would ensure that the university would be in a position to take vital and educationally sound decisions, irrespective of outside pulls and pressures. He rightly remarked on the inability to establish the freedom of academic traditions as prevailing in the advanced countries of the West. In India these institutions were controlled by either governmental or proprietary institutions and the “...members of the teaching profession were bought at low prices and treated almost as refugees from the world of competitive advancement in life”⁴⁰. This idea of the freedom of the university was reiterated by him at Convocation Address delivered at Jadavpur University:⁴¹

“On the preservation of academic freedom depends the strength and vitality of the universities as transmitters of culture, as critical appraisers of culture, as places where the boundaries of knowledge are extended, as the headquarter; of the nation’s general staff of

³⁹ Zakir Hussain, Convocation Address, University of Utkal, Cuttak (Dec. 6, 1959), contained in *The Dynamic University*, p.39.

⁴⁰ Zakir Hussain, Convocation Address, Punjab University, Chandigarh, (Dec. 17, 1960), contained in *The Dynamic University*, p.53.

⁴¹ Zakir Hussain, Convocation Address, Jadavpur University, Calcutta (Dec.24, 1957), contained in *The Dynamic University*, p.6

forces assigned for the destruction of the rampart raised by ignorance and prejudice and superstition, and as places for the formation of character and the building up of free moral personalities from generation to generation. Of course, academic freedom, like all freedom, cannot be absolute. But the only limitations and restraints on it should be those of decency and decorum and those of social responsibility; and these it is the duty and the privilege of all connected with university-students, teachers and administrators alike-to cherish and develop. Freedom is never given; it is earned, and kept only by those who continue to earn it every minute of their active life".

At another convocation address delivered at Aligarh Muslim University he conceived the universities as "the centre of intellectual and moral life of the people" under the circumstance that it was ensured the freedom to transmit the assets of a culture to succeeding generations. But this transmission of culture had to be pursued:⁴²

"...in the right manner or of its healthy criticism of what is wrong with the society. It would neither be able to defeat the forces of ignorance, superstition and prejudices, nor fortify the defenses of knowledge and wisdom, high morals and noble life.....But, we who are associated with the universities should not forget the fact that this freedom too like the other freedoms puts restrictions also. Real freedom is that which willingly imposes restrictions on oneself. We do not call way-wardness and whimsical vacillations freedom".

In a manner of speaking he cautioned his audience about the abusing the idea of freedom. The central dilemma for the university in India arose because the universities were not providing any perceptible lead in resolving the

⁴² Zakir Hussain, Convocation Address, Aligarh Muslim University, Aligarh (January 28, 1959. in Urdu) cit. in Salamatullah and Quadri, A.W.B. 1999, *Zakir Husain on Education*, NCTE, Delhi. pp.66-67.

"...perceptible lead' despite compelling situations faced by the country". He saw this failure of the universities as an outcome of "...an almost complete preoccupation with mere transmitting of knowledge acquired by some to others" There appeared to have been little reflection in the universities about the nature of knowledge and the methods and techniques employed for furthering its frontiers. This maladjustment was a product of unjustifiable faith in the structures that had been installed. As one who had been a pioneer of modern education in India he spoke from experience when he pointed out that the present deterioration was an outcome of the '...terrific torrent of routine; the universities have no time to think'. As a result the universities had fallen victim to the gravitational pull of uncritical habits, "slovenliness, indifference and apathy. Anees Chisti elaborates upon Husain's thought:⁴³

"The crisis of smallness in our universities is due mainly to an unplanned structure of education having to confront an onrush of students in increasing numbers. There is need to follow the selectivity principle, for according to Hussain, education must select."

What were the prime concerns of the university? In another Convocation Address delivered at the University of Calcutta Husain elaborated upon the

⁴³Chisti, Anees. 1967, *President Zakir Hussain: A Study*, Rachna Prakashan, New Delhi. p.62.

concern for the individual and the spiritual points. One of the roles of the university was to enable the realization of the latter:⁴⁴

“Here the university as an educative agency has to mediate between the subjective mind of the educand and the objective mind concretized, crystallized, as it were, in goods of culture. This is the mediation between the individual and his culture, between him and the sciences, the arts, the techniques, the religions, the moral and legal codes, the social forms, the institutions, the personalities, in which human culture is embodied.....The third concern of the university, in my view, is to be clear as to the goods of culture with which it brings its students in contact, and in what sequence and with what intent.....And this brings me to the fourth concern of the university: its method of approach to its intellectual work.....Finally, I think, should come the university’s concern for the steadily growing approximation of the society in which it is privileged to serve to a better and a juster and a more graceful way of life, if for no other reason, then because the individual mind, whose development we have so far regarded as the chief concern of the university, cannot hope to grow to its full perfection without a corresponding advance of the collective social existence. If we aim at excellence in the individual, we have to aim at it also in society. The university should project itself into the community. All barriers between the university and the life of the people, between the acquisition of scientific and technical knowledge and its utilization for the social good, must go. Individual development and social responsibility should be the guiding stars of university work”.

One of the functions of the university was the transform the teaching methods that ingrained passivity and to replace them with methods that stimulated active participation and disciplined, purposive intellectual work’.⁴⁵

Further, the principal function of the university is to introduce the students to the

⁴⁴ Zakir Hussain, Convocation Address, University of Calcutta, (Dec.20, 1959), contained in *The Dynamic University*, pp.23-31.

⁴⁵ Zakir Hussain, Convocation Address, University of Utkal, Cuttak (Dec. 6, 1959), contained in *The Dynamic University*, p.36.

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rich inheritance of world culture. This task when performed gives concrete forms to values that transcend subjective whims or interest, "...values which when experienced, grip one with a firm grasp, values which demand their realization through you, which demand commitment".⁴⁶ If a university were to illuminate thought and action, if it were a community that thinks, it would be thoroughly dissatisfied with any estimate of the university which did not include these tasks. In other words it should least subject its own activity to the strictest intellectual scrutiny. Even a nodding acquaintance with educational thinking in the world is enough to indicate that there is hardly anything in the complex of activities that is not under ceaseless critical fire.⁴⁷

Finally, Husain stressed the need educational, economic and academic planning in each university, for only then could it justify the claim that it was a constituted community.⁴⁸

"The wider the participation of the university community in the discussion and determination of these plans, the more effective and fruitful they can be trusted to prove... Even plans designed by others and imposed from without may, perhaps, be better than no plans; but however well designed and however tactfully imposed, they are bound to be but very distant second-bests. I wish some universities in India may set about this task with the active co-operation of its administration, its teaching faculty and its students".

⁴⁶ Ibid. pp.42-43

⁴⁷ Zakir Hussain, Convocation Address, University of Kerala, Trivandrum (Nov. 8, 1961), contained in *The Dynamic University*, p.67.

⁴⁸ Ibid. p.70



Jawaharlal Nehru is important contemporaneous discussant on the nature of the university. In an address delivered at the University of Saugar, Nehru insisted that one of the functions of a university was to produce creative minds. Nation building could not proceed by reproducing the thoughts of the ancient thinkers. What the new nation required was "creative, inventive and vital activity". The question then was how to nurture creative minds. Thus he observed:⁴⁹

"I know that the University of Saugar cannot produce creativeness; but what it can do is to provide an environment in which creativeness and vitality of mind and body have a place and can prosper".

The universities were thus implored to adopt a dynamic approach to cultural matters. It is known that Nehru was quite intolerant of narrow approaches and conceptualizations of culture and of those who opposed novelty and spoke only of Indian culture, who shut their minds to the outside world and demanded that others shut their minds too. In his inclusivist vision the process of excluding other cultures displayed a lack of culture, while inclusion indicated growth. Dynamism required avoiding at all costs lapsing into cultural stagnation⁵⁰ He proceeds further and says:⁵¹ Nehru's vision for the university was that of a site for the inculcation of cultural pluralism, the university was not merely a place for

⁴⁹ Jawaharlal Nehru's Speeches: Vol. Two, Publication Division, GOI. p.431.

⁵⁰ Ibid. p. 434

⁵¹ Ibid. p. 434

acquiring professional skills or credentials for a vocation, but of culturally transforming the individual.

“How many of you have that dynamic approach and how many of you are thinking in terms of getting jobs here and there under the Government? Whether you go into Government service or take up any other occupation, what is your ideal? ...Or is it to achieve something creative and good? Are you just dragging on an unworthy existence for a number of years and doing nothing else? That is a big question facing India. Whatever our virtues and failings-and a long list can be prepared of both-I believe in facing life in an adventurous way, in meeting life more than half-way without making a noise and without shouting”.

His conception of the university was the University of Culture: “...a university is essentially a place of culture, whatever ‘culture’ might mean”. But he does clarify his conception of culture by distinguishing between national culture and human culture. But places greater emphasis on human culture which is deeper than national culture. Every nation possesses “special cultural characteristics which have been developed through the ages” These evolve over the ages, are important and he bequeaths that these cultures should be adhered to.

However:⁵²

“But there is something that is deeper than national culture and that is human culture. If you do not have that human culture, that basic culture, then even that national culture of which you may be so proud has no real roots, and will not do you much good”.

⁵² Ibid. p. 427

The universities have to pay attention to the development of an 'integrated view of life', which he lamented was absent in his time. This he found puzzling and exhorted the universities to address the problem:⁵³

"If the universities do not teach some kind of basic wisdom, if they think in terms of producing people with degrees who want certain jobs, then the universities may have perhaps, solved to a very minor extent the problem of unemployment or provided some technical help or other; but they will not have produced men who can understand or solve the problems of to-day".

Nehru thinks of the university as an ideal place where men and women could find enough time to think, and reflect upon ideas and goals and objectives.

He observed:⁵⁴

"It is only in the peaceful atmosphere of a university that these basic problems can be adequately considered. It is only when the young men and women, who are in the university to-day and on whom the burden of life's problems will fall tomorrow, learn to have clear objectives and standards of values that there is hope for the next generation".

At a convocation address delivered to the University of Allahabad in 1947 he underlined the significant rôle of universities in national life, and more importantly as a symbol of humanism, for tolerance, for reason, for progress, for the adventure of ideas. In other words the university:⁵⁵

"...stands for the onward march of the human race towards even higher objectives. If the Universities discharge their duty adequately, then it is well with the nation and the people. But if the temple of learning itself becomes a home of narrow bigotry and

⁵³ Ibid. p. 424

⁵⁴ Ibid. p. 391

⁵⁵ Jawaharlal Nehru's Speeches: Vol. One, Publication Division, GOI. p. 333.

petty objectives, how then will a nation prosper or a people grow in stature”.

The universities and educational institutions have a responsibility in as much as guide our destinies, lighting the way to the right path, even when those paths are threatened by the madness of bigotry”:⁵⁶

“We are not going to reach our goal through crookedness or flirting with evil in the hope that it may lead to good. The right end can never be fully achieved through wrong means”.

The foundation of the university in a world that need be saved would have to rest on the method and approach of science, since no matter what activity is pursued it would profit by the methods of science.⁵⁷

“It is for a University to realize and to lay stress on this essential basis and foundation, those standards of thought and action which make an individual and a nation. Above all, this is necessary to-day, during this phase of extremely rapid transition, when old values have almost left us and we have adopted no new ones”.

The table below summarises the university as envisioned by educationists, philosophers, intellectuals and statesmen.

Thinker\Functions of the university	Production	Culture	Reproduction	Society
Newman	Understanding respective values/culture	Cultivation of mind	Imparting universal knowledge	Improved services to society
Flexner	Search for truth Conservation of knowledge and ideas	Interpretation of knowledge and ideas	Training of students	

⁵⁶ Ibid. p. 383

⁵⁷ Jawaharlal Nehru’s Speeches: Vol. Two, Publication Division, GOI. p.392.

Thinker/Functions of the university	Production	Culture	Reproduction	Society
Gasset	Scientific research and training		Transmission of culture	Teaching of professionals
Nehru	Search for truth, Adventure of ideas	Stands for humanism, tolerance and reason	Onward march for human race	Duties to nation and people

1.4 Role and Purpose of University

In most countries of the formerly colonized world there are at least two systems of education that include the traditional system and other the modern. In theory there is a linkage between the two systems whereby a graduate from one can cross over to the other and vice versa. In practice, however it never happens, and the two systems are separate. If we examine both closely, we will find a dichotomy between the traditional and modern formal one (fig. 1). Most of the modernizing concepts needed for the formulation of society and its development are absorbed through the modern system. This dichotomy in the system means that education has not been able to fulfill its lofty goals of providing simultaneously practical skills, social homogenization, and a basis for cultural identity in a proper fashion, and that failure has led to the redefinition of the role and purposes and types of education that universities offer.

A former Vice Chancellor of Essex University, United Kingdom, A.E.

Sloman pointed out that:⁵⁸

'The university is a community where the student is guided in the first stage of a lifelong task of self education, a community whose concern is not just with the pursuit of learning but with the fulfillment of lives'.

Such involvement is vital since the universities are pre-eminently the forum for a critical assessment of society, an assessment that is sympathetic, objective, and unafraid. For this purpose, it is necessary, as a first step, to develop the universities themselves into communities where such values are prized and practiced. The development of such a "university community" requires a kind of physical environment that inspires community spirit, attitudes and action. Thus planning and designing an appropriate physical environment conducive to the idea of the university is a delicate process, requiring sensitivity and the talents of qualified architects responsive to the special environment and conditions that the university provides. In short, the university environment must create a mental simulacrum of excellence, for it is to serve as the site where the progressive forces of the nation will be generated and disseminated, the place where the aspirations of the nation are fulfilled.

There are four central organizational elements that constitute any educational institution that includes students, faculty, physical facilities and the

⁵⁸ Cit. in Kanvinde, A. & Miller, H. J. 1969; *Campus Design in India: Experience of a Developing Nation*, Kansas State University Press, Manhattan, Kansas, USA.p.23.

academic programme. While the quality of the academic programme is most important, this happens to be a function of the quality of the social, living, work and study environment of the college or university campus.

'A university campus environment has a great deal to do with the ability of the organization institution to discharge its educational responsibility effectively'.⁵⁹

The university of today is a much larger and far more complex institution than many administrators have hitherto realized. It is true that the student teacher relationship is more important than the buildings. The old Indian Gurukul system of teacher and disciple living together had its recognized qualities, advantages and limitations. However, the given the canvas of the production and reproduction of knowledge, the number of students in relation to qualified teachers, economic constraints, time limits, and the democratic idea of educating all who are qualified precludes the realization of an older ideal and puts the university under severe stress. The student in a contemporary university would be extremely handicapped were it not for the immense functionally planned, well lit, ventilated and equipped academic buildings, that come with a wide variety of other physical amenities that form our finest university campuses. Though it is granted that a motivated student can adjust to austere surroundings and get an acceptable education, it is also recognized that intensive mass education requires

⁵⁹ Kanvinde, A. & Miller, H. J. 1969; *Campus Design in India: Experience of a Developing Nation*, Kansas State University Press, Manhattan, Kansas, USA.p.14-15.

good architecture to provide an environment that will enhance the efficiency and well being of those involved.⁶⁰

A university campus is a costly, permanent, growing creation. Its lifetime ordinarily is measured in centuries. Universities are permanent institutions of strategic importance for the future development of the country, or that is the way they have been looked upon for the last two hundred and fifty years. Though physical facilities may be less important than other factors in the learning process, it is nonetheless true that a good or bad campus environment can spell the difference between a fine university and a mediocre one.

'A good campus helps attract good teachers, and the qualities of the university's physical environment affects the atmosphere of campus activities, the mood of students and the attention of external agencies and patrons'.⁶¹

Such qualities as adequate illumination, ventilation, proper services, low cost maintenance, good furniture and equipment and a fine landscape, are often ignored or considered to be relatively unimportant. As a result many new Indian campuses are poorly planned, unsightly, poorly utilized, poorly equipped and costly to maintain. A nation with scarce resources cannot afford such wastefulness.

Kanvinde says that the experience with institutional-building the world over has certified the long term benefits of careful pre-planning by qualified

⁶⁰ Ibid. pp. 20-21

⁶¹ Ibid.p.2

professionals according to accepted procedures and minimum standards of quality. It is true that constructing a university may take more time and may prove more expensive, but in the long run such a policy proves wiser and more economical. Such planning would permit India to utilize her scarce resources in the best possible manner to provide campus environment suitable for the nation's educational needs and the fulfillment of her aspirations.⁶²

1.5 Trends in Campus Design

Campus design today is part of a highly professionalized activity called 'planning', which, *inter alia*, attempts to impose a set of solutions onto a territory. 'Earlier there appears to have been no emphasis upon planning the landscape of a university, in fact the landscape was just seen as an addition and a space within the fabric of the university for the extension or installation of new facilities'.⁶³

So how does one go about designing for university that is landscaped with the social milieu of the land where it is established? First and foremost design has to be guided by the functions that are required. Fundamentally human activities are dominated either by human factors or by technical factors, with some in the middle that vary with the degree to which human or technical factors control the nature of the design (fig. 2). The designing of any significant campus required both physical and non-physical component of design (fig.3). Designing a

⁶² Ibid .p. 20

⁶³ Rothblatt, Sheldon. 1997; *The Modern Universities and its Discontents*, Cambridge University Press, UK,p.103.

university that functions effectively while growing, changing and meeting the new demands made upon it, including the satisfaction of aesthetic needs require an approach to design that supports the creation of a fabric of intelligently organized supporting structures and systems. Such a fabric must grow from an idea that is eventually developed into an overall concept embodying several principles. Kanvinde has identified three fundamental parts of a campus all affected by change, and listed in order of importance. These are:⁶⁴

1. Building
2. Exterior Spaces
3. Supporting site elements such as circulation and service.

The ranking indicates that buildings are the primary consideration in campus design. The major institutional functions are supported by interior building spaces, which are sheltered learning and living units, designed individually for specific purposes so that many and varied kinds of learning activities can occur simultaneously. Since buildings occupy land, the use of that land is next in importance. Often the exterior spaces for movement and access are what are left after the buildings have been located. However, in good campus design, exterior spaces are as carefully designed as interior spaces. Some exterior spaces exist for educational purposes, such as play fields, open amphitheatres, areas for students and faculty to congregate and toss ideas around etc. But they are no more important to overall campus design than other exterior spaces, all of

⁶⁴ Kanvinde, A. & Miller, H. J. 1969; Campus Design in India: Experience of a Developing Nation, Kansas State University Press, Manhattan, Kansas, USA.p.38.

which are simply extensions of, and linkages with, interior spaces. Circulation (pedestrian and vehicular) and service systems (sanitary, electrical, water etc) are subsidiary considerations. Nevertheless, they are frequently poorly integrated into the total fabric of the campus and superimposed on a framework that initially ignored them. In some instances the pedestrian circulation system may be allowed to establish the basic framework of the campus, since movement of students is a primary functional requirement.

Further, the campus has often been compared with an organism. Like an organic entity, a campus comprises of hierarchy of diverse elements that gives it a comprehensible form. The integrated systems, as in any organism, are essential parts of this differentiated structure. The 'structural skeleton' is the framework of buildings. The ordered sequence of linked spaces could be considered the spaces. The services provide the networks of 'nerves' and the circulation system consist of pedestrian ways and roads. There is an administrative "brain centre" that should be convenient and easily identified from the campus entrance. And finally it is important for a campus to have a heart or core of centralized activity around which the whole campus grows and functions. There should be a relatively large collector space or plaza which is usually dominated by an important feature such as the library, a bell tower or a fountain. These are the general features of a university campus.

1.6 University Architecture

James Fergusson points out that architecture is "... the fine art of ornamental building as distinct from the useful art of building or civil engineering".⁶⁵ Babu Rajendralal Mitra indicated that architecture was the art of the science of building, and not just the ornamentation of buildings. Architecture could be considered the profession of designing buildings and environments that takes aesthetic effects into consideration. Anthropologists describe 'architecture as a constructive continuum that is to say as a new type of object culture running parallel to the whole of human cultural evolution'.⁶⁶

Central cultural motifs undergo constant revision in the light of changing socio-historical experience or else they cease to have any meaning within society. One of the fascinating features of architectural form is its ability to survive changes in meaning. The strongest forms are those that are most likely to resist new meanings and to shed old ones. The use of older architectural forms need not in itself imply the reassertion of earlier values; rather it could instead reveal society's understanding of itself as a complex and intricate mingling of the older

⁶⁵ Cit. in Gupta, Narayani.1988. "The useful and the ornamental: architecture in India in the last two centuries", *The Indian Economic and Social History Review* 25, 1. p.61.

⁶⁵ Egenter, Nold. 1992; *Architectural Anthropology –Research Series - Vol. 1. Structura Mundi*, Lausanne, SA

⁶⁶ Porter, William L. 1982; *Higher Education Facilities: The Aga Khan Program for Islamic Architecture at Harvard University and Massachusetts Institute of Technology*, Cambridge; MIT Press Massachusetts. pp. v-vi

forms with its contemporary life. Design can provide an effective vehicle for the communication of meaning and for symbolic expression if it draws upon shared ways of life. Architectural form can be found, as they historically have been, to embody ideas, society, and symbol as they are operating at any given time and place. They are vital to recognize in a period of transition, when a heritage is rediscovered, when new structures are created, when there is an urgent need to find socially responsive forms, especially for the poor.⁶⁷

The campus, as suggested earlier, is the physical environment created when buildings are constructed to allow the idea of the university to flourish. According to Stuart Lipton:

“Good building design in the higher education sector is not just about making the academic environment more attractive. It is also about ensuring that buildings serve the needs of the institution and the people who use them. Well designed university buildings help students learn, well designed research facilities make people motivated and productive, good estate design can link with the wider community and provide an asset for society at large”.⁶⁸

Similarly, Michael Bateman says that our higher education institutions carry major responsibilities; enabling young people to realize their potential, encouraging others to return to learning; universities have consciously or unconsciously taken on a new set of obligations fostering a creative environment

⁶⁷ Porter, William L. 1982; Higher Education Facilities: The Aga Khan Program for Islamic Architecture at Harvard University and Massachusetts Institute of Technology, Cambridge; MIT Press Massachusetts. pp. v-vi

⁶⁸ See, The University Challenge: www.architecture.com/go/architecture/debate/forums2674.html last updated August 29, 2003.

that stimulate learning, setting standards of design and all too often perhaps, being the beacon of good civic design in cities where that light has been dimmed for too long. Universities have indeed shown what can be achieved by producing buildings that are fit for their purposes and that make clear, confident statements within the urban form.⁶⁹ Similarly, Brian Edwards argues that university campuses have traditionally embodied the ideals of higher education that include the pursuit of intellectual inquiry, and striving for excellence, and social and liberal experiment. Oftentimes buildings do exhibit these qualities but the manner of communicating these ideas becomes an issue for designers. Nevertheless:

“...universities are places that have always been at the cutting edge of architecture. Many of the world’s finest buildings are located on university campuses.... The values that underpin higher education may change but the university remains a distinctive world, which our students experience to the benefit of architecture as a whole. ...The ideas introduced to students at university remains influential throughout life, and architecture has a key role to play in contributing to the intellectual life of the campus”.⁷⁰

A university campus has been compared to a city on a small scale because it provides most of the needs for the university community. Unlike a city, however, the university is non-commercial and primarily a place of study. The campus therefore, is a closely knit, unified cluster of buildings with intimate pedestrian open spaces providing a unique environment for living and studying. It should ideally be a quite, comfortable zone far from the normally busy, noisy,

⁶⁹ Ibid.

⁷⁰ Ibid.

congested world. In this sense a campus should be more like a residential suburb or park than a city. The spaces between university buildings, if properly designed, provides areas where students may congregate informally between classes for discussion and rest, or where they can gather in large numbers to watch or participate in sports and other physical activities. An adequate campus encourages social relationship of all kinds in student's activity centers. It furnishes a place for literary, artistic, musical and dramatic performances to culturally enrich the university community as a whole. The university campus also provides quiet and private hostel rooms where individual students may withdraw for study, meditation and rest. The same hostel offers the opportunity for students to identify with a small "family" group who share basic living facilities. At meal time a considerably large family gets together and mixes socially.

The design of a campus requires a philosophy to satisfy the needs and objectives stated in the academic plan and in the specific requirements of the building program related to the qualities of the site. Only an architect is capable of creatively synthesizing all the elements necessary to satisfy the requirements of a truly fine campus. The concerned architect as Kanvinde puts it, quoting the Roman architect Vitruvius will be guided by three criteria in the process of design:⁷¹

⁷¹Kanvinde, A. & Miller, H. J. 1969; *Campus Design in India: Experience of a Developing Nation*, Kansas State University Press, Manhattan, Kansas, USA.p.38

1. A building must be soundly constructed. Its structural system wall and floor materials, its mechanical and lighting systems must be of good quality that will last and require little maintenance
2. A building must be planned suitably for its purpose. It must be functionally convenient and efficient as well as provide a comfortable and enjoyable environment.
3. A building must be beautiful. An architect trained as an artist can understand and appreciate proportion, balance, scale, appropriate character, material relationships, color harmony; etc. will be able to deliver a cultural object that will be aesthetically pleasing.

Apart from the cultural dimension, climate is the other most powerful determinant in the evolution of architectural style. Climatic conditions surely determine the type and character of architecture of a region, since it conditions the way of life of the people; their eating, their dress and life style. Thus the wind direction and the direction of sunrise and sunset, the number of hours of sunlight at the different times of the year are important variables. This suggests that shadows are as much a physical necessity as it is a requirement for aesthetic appreciation, for the eye is trained to find repose and comfort in the cool shade particularly in hot climate like India.

1.7 Aesthetic Beauty

The aesthetic in architecture is a term dealing with form, design and/or quality of construction of a particular sign, building, site or structure, which makes a judgmental remark about the level of beauty or artistic value. It describes the visual appreciation of buildings and spaces. Beauty, by definition is the

evident harmonious relationship of all parts of things observed. Rather than referring to a superficial aspect, beauty is the essence of a thing. Ugliness is simply the absence of beauty, a lack of unity among elements or the presence of incongruous elements. It is found whenever man has insensitively placed his structures in the landscape. It follows that a visual harmony of all parts of landscape including buildings and other man made elements is a desirable objective in the design of a university campus.

The best illustration of this reflection is the effect of nature upon the emotion of man. In observing a natural landscape there is a very real pleasure in sensing the unity and harmony of the total scene. But there is no absolute standard of beauty. Some time art conquers nature. 'Art, improve and selects nature'. Rothblatt writes, during the eighteenth century artificiality arose out of the conflict in elite culture between nature and art or the natural world in its true conditions of civilization, with self-regulation being the supreme form of civilized behavior. Being natural was a problem for eighteenth century men and women who were continually tempted by the freedoms provided by the actors' opportunity to assume innumerable identities.⁷²

Thus, in constructing a campus environment, the necessary classrooms, offices and living spaces ought to be as closely related to the qualities of the

⁷²Rothblatt, Sheldon. 1997; *The Modern Universities and its Discontents*, Cambridge University Press, UK, p.55.

existing natural setting as possible. The selection and use of materials should be restrained and indigenous. This would ensure the landscaping of the campus where future extensions in the campus are required. The landscape exists in the beginning. The man made element must be carefully introduced so as to harmonize, complement, and be completely integrated with the qualities of the existing natural environment.

1.8 The Objectives of the Study

The objectives of the proposed study are two fold:

a. **Broad Objective:** To explore and understand the relationship between the ideal of the university and its architectural forms.

b. Specific Objectives

- i. To identify the university architecture.
- ii. To understand the organization of spaces in relation to the organization of knowledge.
- iii. To identify the socio-cultural impress upon university architectural form
- iv. To understand the aesthetic of university architecture.
- v. To relate the above to the idea of the university.

1.9 Methodology

The proposed study has employed a comparative approach in studying university architectural forms, and the narrative are being structured historically, and illustrated pictorially. This has also involved interviewing faculty members of these universities, as well as architects to identify how these respective visions that have given concrete forms, and whether they thought this was done adequately. This has also required conducting unstructured interviews with the concerned personalities.

1.10 Delimitation of the Study

In order to emphasize on the crux of the study it is important for a researcher to know the limitation. Therefore, a researcher has to limit himself within certain stipulated boundaries, keeping in view the broader canvas of production and reproduction of knowledge. It is for the researcher himself to know the limitation of his research area keeping in mind the time, energy and resources. A research work is time consuming particularly for a university student thus, it becomes mandatory for him to completely finish the work within a given time limit.

Keeping these in view the present study which has attempted to understand the relationship between the ideals of knowledge and university

architecture where the researcher has undergone to explore how models and ideals of education are reflected in the planning and architecture of the university. The study entitles "Knowledge Ideals and University Architecture: A pictorial and Socio-Cultural Study of the Architecture of two Indian universities" itself shows that the study is conducted only in two university. The study is limited to only two Indian universities located in the north of the country. It is further delimited to the southern part of Delhi. The study is again delimited to Jamia Hamdard and Jawaharlal Nehru universities both of them are campus universities (which do not affiliate colleges). So in a nutshell it can be said that the present study is delimited to only two campus universities of North India located in South Delhi.

1.11 The Case Study

The proposed study has been conducted by taking two case studies: 1. Jamia Hamdard (Hamdard University) and 2. Jawaharlal Nehru University.

CHAPTER II

ARCHITECTURE OF JAMIA HAMDARD

2.1 Background of Jamia Hamdard

The history of Jamia Hamdard begins with the establishment of a small Unani clinic in the year 1906 by Hakeem Hafiz Abdul Majeed who had a vision of transforming the practice of Unani Medicine along modern scientific lines so that Unani medicines could be dispensed in a more efficacious manner to patients. He christened his endeavour "Hamdard" which means "sympathy for all and sharing of pain". His son Hakeem Abdul Hameed dreamed of setting up a complex educational institution which would concentrate on highlighting the contribution of Islam and Islamic culture to Indian civilization and to the development of Unani medicine.¹

Jamia Hamdard is situated in the sylvan surroundings of Tughlaqabad on the Mehrauli-Badarpur road surrounded by Tughlaqabad Fort in the east, Qutub Minar in the west, Jahanpanah City Forest in the north and overlooking hillocks and ridges in the south. The site is picturesque and is distant from the din of the metropolis except for the busy Khanpur crossing. "The serenity, the hillocks, the ridges and historical remains all around endow the campus with an ideal environment for education and research. Jamia Hamdard encompasses an area of

¹ Bulletin of Information and Prospectus, 2004; Jamia Hamdard, Hamdard Nagar New Delhi. pp. 8-11.

90 acres of land on which were originally located the Institute of History of Medicine and Medical Research (IHMMR) and Indian Institute of Islamic Studies (IIS)².

Jamia Hamdard evolved out of a number of Institutes and Colleges which in their initial stages were part of IHMMR. The institute began to take concrete shape in 1962 when its foundation stone was laid by Pandit Jawaharlal Nehru (Plate 1: Append II). The new building of the institute constructed at its sprawling campus, Hamdard Nagar was inaugurated on 14th February 1970 by Prime Minister Mrs. Indira Gandhi (fig.5).

2.2 The Buildings of the Campus

As has been stated earlier, buildings are the primary considerations for campus planning since major institutional functions are carried out in the interior spaces of the building. In the beginning, Hamdard's different colleges and institute buildings were lay scattered in different parts of Delhi before the existing campus land was purchased. As related to me by Dr. Ausaf Ali (Director, Research and Archives, Jamia Hamdard) that in the early stages there was no visionary plan for the campus since the different departments, faculties, institutes and colleges were either part of IHMMR or IIS. There were a few important buildings but it could not be said that they conformed to a scheme or plan.

² Press Release January 29th 1992, The first convocation of Jamia Hamdard, Hamdard Nagar.

According to him the real planning of the university campus began with the award of deemed university status to the institution in 1989. It is only after this that the campus began to acquire shape in a planned manner. The first phase comprised the building of the Indian Institute of Islamic Studies (fig.7). This was followed by the construction of the Central Library, Faculty of Pharmacy (fig.8.), Faculty of Unani Medicine (fig.9.), Faculty of Science (fig.10.) that included the Administrative Block), Scholar House (fig.11.), Majeedia Hospital (fig.12.) and few Staff Residential Blocks(fig.13.). These buildings can be located on the site map (fig.6.).

Financial constraints remained a persistent problem for Jamia Hamdard that have hindered not only its steady growth in terms of academic excellence but the construction of new buildings as well. According to by Prof. A.Q. Ansari, Dean, Faculty of Management Studies and Information Technology: "Therefore we are bound to take the construction in phases and are yet to provide many more support facilities to the university community". In the second phase, the prominent buildings that were constructed are the Convention Centre (fig.14.), Chancellor's Lodge, hostels for boys and girls (fig.15, 16.) some more Staff Residential Blocks (fig.17.), some annexes to different departments and faculties (fig.18.) and a Gymnasium Hall (fig.19.)

The ongoing phase is the third phase of construction. The buildings now being constructed are unique and markedly different from the earlier buildings in their architectural pattern. These include Jawaharlal Nehru International Scholar's Hostel (fig.21.), Research and Archives Centre (fig.22.), Faculty of Allied and Health Sciences (fig.23.) and so on. These new buildings are not yet locatable on the site map (fig.6.). But these buildings are conceived according to an aesthetic plan that enhances the appearance of the campus and conveys a sense of harmony.

2.3 The External Spaces

The second most important aspect of campus planning is the handling of exterior spaces. Such spaces include the area left after the buildings are erected. It could as well be the space between two buildings. If planned for before these spaces help in maximizing the interaction level of the university community. Some exterior spaces such as the playgrounds, open air theatres are meant for educational purposes. In Jamia Hamdard the playground (fig.24.) showcases one of the best locations since it occupies the middle of the campus. The Herbal Garden/Medicinal Plant Garden (fig.25.) strategically located surrounded as it is by the Faculty of Pharmacy, Faculty of Medicine and Faculty of Science. Apart from its obvious educational significance, this garden has its environmental importance as well by providing a green area throughout the year. Hamdard

possesses an environmentally friendly campus not only in terms of creating green spaces in the city, but the campus is now equipped with the latest water harvesting systems. The rain water harvesting system planning in Jamia Hamdard is illustrated in fig.20.

The campus is still growing and the planning is dependent upon the needs of the academic programme. As new courses are introduced, building construction programme seek to meet the requirements. Most of the area of the campus is dedicated to health and health related programme of study which reveals that the vision of the founder is still anchored within the plan of the campus.

The world of knowledge is organized into seven faculties/ colleges in Jamia Hamdard:

1. Faculty of Islamic Studies and Social Sciences
2. Faculty of Allied Health Sciences
3. Faculty of Management Studies and Information Technology
4. Faculty of Unani Medicine
5. Rifaidda College of Nursing
6. Faculty of Pharmacy and
7. Faculty of Science

The interdisciplinary approach enshrined in the institute's constitution particularly in the areas of Science and Health related studies is actually reflected

in the planning of the campus. The location of the Faculty of Pharmacy, the Herbal /Medicinal Plant Garden, the Faculty of Science, the Faculty of Allied Health Sciences, the Faculty of Medicine, the College of Nursing and the Majeedia Hospital are all located in the south east part of the campus.

2.4 The Integration of Site Elements

The third aspect of campus planning is the integration of supporting site elements. The entire campus of Jamia Hamdard is connected by roads used by pedestrians and vehicles as well. The roads intersect each other at right angles appealing to the aesthetic of symmetry (fig.26.). This is visualized in the site map (fig.6.). The lush greenery on both the sides of the roads not only provides cool shaded areas but adds to the beauty to the campus (fig.27.). The sanitary, water and electrical service systems are appreciable since they do not violate the aesthetic norms. In other words they are not poorly integrated into the landscape. Sanitation has been given a prime importance at Jamia Hamdard. There is a proper system of management of cleanliness, disposal of hospital waste, human excreta, after use water. As far as water management is concerned, the water supply system is well embedded and connected to the various buildings. A state of the art water harvesting system taps the rain water (fig.20.).The electrical system comprises a system of wires running underground, while street lamps provide strategic lighting to the roads and the premises of the buildings. Apart

from satisfying functional requirements, the lighting system augments the beauty of the buildings creating effects of light and darkness (fig.28.)

The campus of Jamia Hamdard reflects overall growth as the planners strive to transform it into an ideal campus environment for teaching and research. The ideals of knowledge are to be reflected in the architectural planning of the campus. The spaces have been handled in such a way as to make the campus an integrated whole. The spare spaces are covered with gardens and green lawns. The buildings, the roads, the playfield, the gardens, the cleanliness, the lighting together create the ambience of a picturesque campus.

2.5 Building Architecture

In order to meet the challenges and the goal set forth in its academic programme and vision, Jamia Hamdard exhibits no distinctive architectural pattern. The institute never employed a single architect to present a plan. At different moments different architects were employed to construct buildings in the campus. There is no uniformity or pattern to the design of the buildings. The different architects (Aseema Architect, Khan Architects etc.) were separately were guided by their own perceptions of what the institute required and may have ignored the ideals of the founders. This problem was precipitated by the absence of a Campus Master Plan that guided different generations of architects as the demand for new buildings increased.

From the beginning the major buildings that came up such as the Indian Institute of Islamic Studies (now, also the Central Library, (fig.7), fig.(29.) were spectacular with an upward thrust towards the main entrance. The top of this circular six storey building cuts the sky line at an angle of 120 degrees. The construction is handled with great skill so that its tall and circular strong form sets up a pleasing and effective relationship with the city. It seems to possess a scale commensurate with its urban role but is devoid of an orientation towards core of the campus. The entire circular building is decorated with symbolic arches interrupted by intricate jalis at regular intervals. Above the main entrance, every storey is marked by protruding balconies that cast beautiful shadows while flanked by arch type windows topped by window type arches. The entrance is coloured with light brown horizontal and vertical lines and light grey squares whereas the arches of the main structure are painted reddish brown along the horizontal lines and light brown along the vertical ones.

The next prominent building is the Faculty of Pharmacy (fig.8), which is a four storey flat-sprawling structure facing east towards the Herbal Garden. The rectangular rooms are separated by horizontal pillars located at regular intervals. The base pillars of the building divide the rooms into two halves giving the two windows a square shape. The formation of rectangles from two squares appearing at regular intervals cast shadows that uniquely characterize the beauty of this

building. The two contrasting colours brick red and yellow, the lawn in the front, carved out garden plants and lined Ashoka trees further add to the effect.

The Faculty of Unani Medicine (fig.9.) is located in a four storey flat-rectangular shaped building. The centrality of the structure is marked by a U-shaped arch which beautifies the entire building and the protruding balconies within it play a feeding role for natural light in the corridors. The building is painted in the deep brick red and each floor is marked with off-white horizontal strips, the flanked and symmetrical windows further add to its beauty.

The building in which the Faculty of Science (also Administrative Block), (fig.10) (fig.30.) is housed is comprised of three wings and the centrality of the structure is marked by the main entrance which opens directly towards the middle wing. The symmetrical pillars and the shafts crossing each other at right angle gives way to square rooms at regular intervals, showcasing the main feature of the building. The designs at the bottom could have provided the structure with a pleasant look were it not covered by plants nearby. As far as colour coordination is concerned the main building has a proper contrast but the entrance it does not fall into place thus robbing the building of any appeal. The huge structure has not been located at a distance from the boundary wall of the campus facing on the front. As a result, the sprawling building is devoid of visual focus.

The building of Majeedia Hospital (fig 12.) opens directly towards the main gate of the hospital. The building has two circular wings connected by a corridor.

The building appears to cut the skyline in a haphazard manner but still gives pleasant look. The structures jutting out above the arches create a pleasant effect by providing shadows. The colours do have a soothing, the gardening in front of the structure augments this effect.

The Convention Centre (fig.14.) is one of the most spectacular buildings present in the campus. The predominant form is that of arches. The arrangement and location of the arches is such that they create an interesting play of light and shadow. The square tower erected in the middle of the building cuts the skyline at right angle at three different points conferring the structure with an outstanding beauty. The garden and the floor together in the front are designed in hexagons filled with green grass and various garden plants strategically placed to have the maximum aesthetic effect (fig.31.).

The Gymnasium Hall (fig.19.) is a high rise and a huge hall structure, rectangular in shape with a sloping roof and located to the west looming over the playfield. The colour combination is unique inasmuch as the stone slabs are in light purple and the strips and front are in beige. The hall provides many indoor games and sports facilities. It also is a hall for large gatherings such as musical and literary programmes. The raised platform around the hall provides sitting space for spectator sports.

The Jawaharlal Nehru International Scholar's Hostel ((fig.22) and (fig. 32)) is a state of the art structure, and is located to one side of the campus. The Hostel

is relatively in a secluded area providing a calm and comfortable living environment. It well equipped with facilities for students. The Hostel area comprises a cluster of buildings for housing international students. The four storey buildings are given an upward thrust and each building has an arched entrance. The building cuts the skyline by way of a staircase while the inward arched windows form brilliant shadows.

The Research and Archives Centre is housed in the most unique building on the campus (fig.22; 23.) This new building is soundly constructed with a totally new look and is markedly different from all the buildings present in the campus. The older ornamental and the decorative elements are entirely rejected in favour of the glass panes, metal rods and so on, thereby emphasising the interior structure. The jade brick red colour provides a flaunting look to the building. The metallic rods interwoven over the windows form a contrast with the colour of the building. The structure highlights the urban dimension of the facilities housed in the building.

The Faculty of Allied and Health Sciences ((fig.23) and (fig.34.)) is another soundly constructed wonderful structure that finds its place in the middle of the campus. The structure offers an attractive visual focus from all sides. The centrality of the structure is marked by the main entrance marked by a big arch flanked by two small ones, followed by symbolic arches with decorative motifs on both sides. The lawns and the gardens maintained in the front and in the leftover

spaces add to the beauty of the building. The overall structure complements the integral beauty of the entire campus.

There are many more less known structures apart from those described which are not that prominent and are lacking in vital architectural parameters. These are poorly designed, lack adequate illumination, ventilation, are unsightly and even costly to maintain. But the significant buildings which are mentioned above are not costly to maintain. The materials used in these buildings are easily available in local markets and the floors are mostly covered with stone slabs. The external sides of the buildings are cemented and then painted in harmonious colours.

University architecture is an expression of the culture of the land. The architectural design of Jamia Hamdard is in congruence with the culture of the community who live on the campus and are involved with the wider community. In Jamia Hamdard "the contribution of Islam and Islamic culture" finds its expression in architectural form. The cultural motifs embedded in architectural form are as much the part of Islamic culture as that of the Indian civilization. The presence of arches, cultural symbols of Islam, Aayatas from the Quran, mosque are concrete embodiments of Islamic culture (fig.4,5,35,36.)

The architecture of Jamia Hamdard as a whole exhibits a variety of taste as each building/group of buildings is erected for specific requirements stated in the academic programmes. The buildings serve the need of the people who are

engaged in the pursuit and advancement of knowledge. The architectural design gives a wonderful look to the campus and provides an enjoyable environment for living and studying. The design provides the linkages between the people who live there and the community that surrounds it.

CHAPTER III

ARCHITECTURE OF JAWAHARLAL NEHRU UNIVERSITY

3.1 Background of Jawaharlal Nehru University

The mid- 1960s was a period of unprecedented decline in the functioning of universities in India. The ruling classes of the country out of a growing concern over the disruption in the careers of their children mooted the idea of a novel university. Partly because of this and partly under the inspiration of Jawaharlal Nehru's ideas about the university and informed by the successful experiment of Australian National University, the impetus to found a national university in India was strengthened. The JNU Bill was passed in Lok Sabha on 16th November, 1966 and the JNU Act came into force on 22nd April 1969. G. Parthasarthy was appointed its first Vice-Chancellor. The opening ceremony was held on 14th November at Vigyan Bhawan, New Delhi.¹

In its early days, the university's buildings scattered through the city. The Institute of Russian Studies was first affiliated to the university and renamed the Centre for Russian Studies under the emerging school of Foreign Languages, and was located near the IIT in South Delhi. The central office of the university operated from Vigyan Bhawan Annex near India Gate. The Indian School of

¹ From Committee Paper, JNU Silver Memoir Committee; 1996, JNU: *The Year*, ed. Kanjiv Lochan; Popular Prakashan, Bombay. p.3.

International Studies merged with JNU in June 1970, and its academic and hostel buildings were located near Mandi House. Nevertheless, before JNU invited applications for admission in 1971 it had to hire a campus at an annual rent of Rs 14 lakhs. These turned out to be unused buildings of the Home Ministry on New Mehrauli Road (now called JNU Old Campus). These buildings were put to use as academic schools as well as hostels. Meanwhile work started on a one thousands acre plot land allotted to JNU nearby in the rugged terrain of the Aravali range.²

When work on the new campus commenced it was envisaged that the JNU campus would be the largest and most beautiful campus in the world. The campus covers 1000 acres of land beyond Qutub Minar and near Hauz Khas. The campus had its historical importance and environmental function namely to provide Lutyen's Delhi with fresh air from the west. The site is picturesque and encloses a forest. It is an ideal quiet oasis amidst noisy and congested Delhi. C. P. Kukreja, the prime architect planned to make it an ideal campus³. The whole environment is suitable for learning and conducting research. The physical environment has been created by constructing buildings to allow the idea of the university to flourish.

²Ibid. 4-5.

³Seetha Crishna, Designing the Largest Campus in the World, THE NEHRU UNIVERSITY, Article Published in the JUNIOR STATEMENT, October 10, 1970.

3.2 Campus Planning

The physical planning of the campus commenced with the preparation of a blueprint of the campus master plan. Keeping in view the specificity of JNU and its objectives, C.P. Kukreja, the prime architect of JNU with the help of Professor Monis Raza (the then Chairman of Campus Development Committee) and his team, planned to integrate the administrative organization, the academic structure and desirable social and functional relationships of the campus. The architect has analyzed the needs as stated in the academic plan and then translated them through a design process into a physical plan for the campus including buildings, roads and other utilities.

One of the fascinating aspects of JNU's campus planning is the growth of the campus from its core (fig.37) - a plaza mainly consists of School buildings, Library, Lecture Hall (under construction) and Administrative Block. This whole plaza is surrounded by a circular road (Ring road) intersecting at different strategic points to facilitate vehicular and pedestrian movements by linking living-learning units with other utility centers. Since the movement of students is the primary functional requirement, the plaza further links together pedestrian ways. The cluster of school buildings consists of School of Language, Literature and Culture Studies (SLL&CS, fig.38.), School of International Studies (SIS, fig.39.), School of Environmental Sciences (SES, fig.40.) and School of Social Sciences I & II (SSS I, fig. 41. &SSS II). These are arranged in a linear sequence

connected by a single pathway/terrace (fig.42) representing the interdisciplinary approach of the university. The series of buildings further extends to the School of Life Sciences (SLS, fig 43) only to be joined by the School of Computer and System Sciences (SCSS, fig.44.) at a stones throw. But the building of School of Physical Sciences (SPS) does not find its place in this plaza and is located at 'Down Campus'. This dents the idea of keeping all the schools together. One of the reasons is that since its inception there was no conceptualization of the School of physical sciences in the academic programme. The original conceptualization included seven Schools as well as a School of Creative Arts (which later became as the School of Arts and Aesthetics).⁴

A university campus is never physically static due to academic pressures and ever changing requirements. This is evident in the buildings that come up later or contravene the visualization of the Master Plan (fig.45; except for the Annexure Building for Language, Literature & Cultural Studies which is under construction). For instance, the buildings housing the Centre for Biotechnology (CBT), Centre for Molecular Medicine (CMM), Centre for Sanskrit Studies (CSS) and Centre for the Study of Law and Governance (CSLG) do not find their place in the area allotted to Schools and are scattered around the plaza as well as away from it. A new small academic zone is being created in the intersection between Paschimabad (Western Section) and Poorvanchal (Eastern Section) by locating

⁴ Based on Article by Seetha Crishna, Designing the Largest Campus in the World, THE NEHRU UNIVERSITY, Published in the JUNIOR STATESMAN, October 10, 1970

several centers there such as the Centre for Sanskrit Studies (fig.46.), the Centre for Law and Governance (fig.47), along with the Exim Bank (fig.48.) and CHS Library (fig. 49).

Thus the physical plan of the campus is directly linked to the cognitive map of disciplines. This implies that the organization of knowledge has an intimate relationship with the organization of space. Further, it is evident from the above discussion as the canvas of knowledge expands the plan of the campus needs constant revision.

The other fascinating aspect of the JNU campus is the separation of the Residential Blocks from the core of the campus and these blocks are spread out in different sections of the campus: such as Uttarakhand (Northern Section), Dakshinapuram (Southern Section), Poorvanchal (Eastern Section) and Paschimabad (Western Section). It is evident from the plan that in the case of Uttarakhand and Dakshinapuram, three Students' Hostels surround a lawn forming an equilateral triangle flanked by Faculty Residential Quarters (fig.50). This organization is supposed to facilitate more interaction between the faculty and the students. But this residential plan is not executed in the residential blocks constructed later. In order to maximize the interaction among the students, the hostels are planned in two wings with a central courtyard where the Dining Hall, the Common Room and few other recreational facilities are located. Almost the same pattern is followed in all the hostels with little variation. The locations of

hostels are on an average of 10 to 15 minutes walking distance from the academic complex. This signifies the separation between living and learning units.

Among the activity centres the Sports Complex (fig.51.) is located to one side of the campus. The location is not appropriate keeping in view the wholesome purpose of the Complex apart from game and sports. The two Open Air Theatres are located at different places. One is close to a Shopping Complex (known as KC OAT) and the other at a little distance from the Central Library at a solitary near the Parthasarthy Rock (known as PSR OAT, fig.52.). Among the two students activity centres one is located within the core area (yet to be executed) and the other in front of the Narmada Hostel (called as Teflas, fig.53) which includes the Students' Union Office, Foreign Students' Association Office, Canteen, Indoor Badminton Hall, TV Hall and many other Halls for extra curricular activities. This has become a hub of students' activities. These activity centres are of great importance for the student community for the all round development of their personality. Since the meaning of education is no longer confined to books and learning to the four walls of the classroom, the broader meaning of education finds its commensurate reflection in the campus design of JNU.

The other utility centres such as the Health Centre, Shopping Complex, Post Office, Bank Branch, Railway Reservation Counters, Cafeterias/Dhabas

(fig.54.), Guest Houses (fig.55.), and etcetera are located strategically at different parts of the campus to benefit the university community.

The terrain of the campus is natural since most of it is covered with forest. The lush green forest, the floral trees and plants along the roads, pathways give the entire campus an exotic look (fig.56). The left over spaces in and around the buildings are further filled up with garden plants and trees. Though JNU does not have any laid out gardens, the greenery is scattered such that even the boulders do create an iridescent effect and form smaller gardens shape (fig. 48,57.) by providing the campus a soothing ambience and a congenial platform for studies.

The integration of supporting site elements such as circulation (vehicular and pedestrian, fig. 56, 58.) and service systems (Electrical, Water and Sanitary) are as important in the campus plan as the buildings and exterior spaces. The entire campus of JNU is connected with roads and pedestrian ways, which provide a network of spaces. Similarly, the electrical, water and sanitary systems are organized with the purpose of harmonizing the total fabric of the campus. But this side of it is just satisfactory.

As pointed out earlier the JNU campus as a whole reflects the intimate relationship between the organization of knowledge and the organization of space. The philosophical base of academic planning has its commensurate reflection on the campus planning and is evident from the JNU campus plan. The interdisciplinary approach has given way all through the cluster of buildings

arranged in series. A university campus is a dynamic organism continually growing; therefore, planning for change is essential. This is reflected in JNU's campus planning. The JNU campus gives a peaceful environment and is ideally suitable for learning and conducting research.

3.3 Building Architecture

Keeping in view the existing site, the architect of JNU has evolved a creative synthesis and consciously applied as an adornment an innovative building design. This resultant creative synthesis has provided a sound and functionally planned building. The architect has tried his best to harmonize, complement and completely integrate the buildings with the qualities of the existing natural environment. Skillfully designed buildings have harmonious relations with the environment and are appropriate for living and learning.

In order to execute the campus Master Plan the building construction programme started in phased manner. By the end of 1978 the newly developed campus had the Library Tower (fig.59.), and a few academic buildings, residential quarters for the teachers and staff and the hostel blocks of Dakshinapuram, Uttarakhand and Poorvanchal. JNU's construction programme worth Rs. 17 crores was inaugurated by G. Parthasarthy (first Vice-Chancellor of JNU) in 1986. This was completed by 1991 with the construction of the buildings of the School of International Studies, Environment Studies and Languages, the Administrative

Office, the second building of the School of Social Sciences, two hostels, Aravali Guest House and several staff quarters. In 1994, staff buildings were ready in Paschimabad and Purvanchal of the campus.⁵ Later on some other hostels and academic buildings were constructed in different parts of the campus. The campus is still growing and the building construction programme continues in order to meet the requirements and pressures generated by academic expansion.

The most prominent building in the entire campus of JNU is the Library Tower (fig.59, 60.) situated in the heart of the academic plaza. It is a nine-storey building and has a carpet area of about 1 lakh square feet. The ground floor has expanded around the Tower, the other floors have emerge from the centre of the structure forming a kind of plinth at the bottom. The Tower has an urban outlook that is handled with great care so that its tall square-cum-rectangular form gives a strong sense of its urban role. The structure forges an effective relationship with the city, crowning the natural terrain and the ridge as well as the Qutub Minar. The red brickish color of the entire Tower, and each floor boldly marked with off-white color form a contrast with the green color of the trees and plants. The tower comes in to clear visible focus from all sides, cutting the skyline in a way which gives a pleasant look. The garden and the trees in the front and sides of the structure, further add to its beauty.

⁵ From Committee Paper, JNU Silver Memoir Committee; 1996, JNU: *The Year*, ed. Kanjiv Lochan; Popular Prakashan, Bombay. P. 5.

The other prominent building in the plaza is the building housing the Administrative Block (fig.61). Rectangular and flat in shape, it is centred with a courtyard like structure which divides the building into two wings; each wing has its own main entrance which further seems to divide the wing into two halves. The statue of Pandit Jawaharlal Nehru and the garden around it, the high-rise stairs and the platform in the front corner of the building is the only portion, which gives an aesthetic appeal to the structure. But the structure as a whole does not possess a wholesome beauty. The structure also lack in its orientation towards the core of the campus. It possesses a strong form in look as well as in its making. The raised stairs and platforms, the garden in the front, at a stone throw from the building, the vibrant color combinations create an ambience but the holistic beauty of the structure is missing due to a the poor design of the main building.

The cluster of School Buildings is the most striking aspect of JNU's architectural design. The first and foremost noticeable creative design comes from the arrangement of the buildings in a flared form (except for the SC&SS building) purportedly giving an impression of unbound knowledge. The four buildings, SLL&CS, SIS, SES and SSS-II share almost the same design, form and look. The features used to create a flared form, give the building a unique shape. The strips of off-white color find a perfect contrast in the predominant red bricks. Decorative motifs on top of the buildings combined with an appealing skyline give an adorable look to the structures. The garden and trees, the creeping plants over the

terrace that interconnects the cluster of buildings as well as the green set up all around the buildings also do add value and vibrancy to the said structures that inspire and motivate the university community in the pursuit of knowledge. The interplay of light and shadow that provides relief to the eye is achieved specially designing the flooring. The beauty of these buildings is not appreciated from the entrance alone. The backyards where the parking lots are located are attentively designed so that they are not less important than the fronts as far as the over all aesthetic is concerned (fig.62).

The other two buildings in the cluster are SSS-I and SLS (fig.43, 63.). They share almost all parameters and do not completely deviate from the above discussed structures. The most striking feature of these buildings is their inverted pyramidal look, which finds an expansion of the earlier one. To achieve this effect, slanting panels with worked edges have been used. This is the central attraction. The slants mounted at regular intervals through out the building create shadows that augment the aesthetic value to the structures. The building at a stone throw from here is SC&SS (fig.44.). This deviates considerably from the other buildings. The structure is flat which signifies clearly its aloofness from the main cluster and flexibility in architecture. Keeping in view the curricular perspective the structure is not hefty, explained by its compact form, having only two floors. The extended circular and box type designed structures round the building, with separate first

floor, serves the purpose of keeping out the heat, thus providing a cool aura to the School. They further give an innate look and beauty to the structure.

The flexibility in building architecture is demonstrated in the buildings housing CBT and SAA. Architectural form is dictated by a particular age, region and climatic conditions. The dominating pattern and use of local materials is evident in these buildings. The CBT building has a simple lay out. The central portion of the structure is the main entrance wherein two corridors originate, the one leading towards the entrance of the Conference Complex (Auditorium, SAA) and the other towards SAA building, leaving a courtyard like space, which allows formal/informal gatherings. This open space for a garden links the buildings housing SAA and CBT. The architectural design of SAA and its auditorium (fig.64.) reveal a simple design but still provide a worthwhile look partly due to the vibrant color combination

The buildings in the new academic zone (CSLG, fig.47, CSS, fig.46, Exim Bank, fig.48 and CHS Library,fig.49) share much in common in terms of form, design, and color harmony and material relationship. As far as the architectural patterns of these buildings go they are simply laid out in flat and rectangular shapes, making an impact upon the present trend. The gardens, trees, plants and the pathways around these structures give an integral beauty to the entire zone.

Another unique feature of architectural design in the JNU campus is the architecture of the Students' Hostels (fig.65). The hostel building blocks of Ganga,

Jhelum, Sutlej, Periyar, Kaveri, Godavari, Narmada and Sabarmati share much in common. The most noticeable part of these structures is their pyramidal shape and each floor is marked with an off-white horizontal strip, which gives a perfect color contrast with the red bricks. The slanting walls which divide the structures at regular intervals give way to the rooms and the regularity in this pattern gives an overall curvy look to the buildings. The regularity of this pattern, the protruding balconies and the way they cast shadows is the essence of the beauty of these huge structures.

The other hostels such as Tapti (fig.66), Mahi-Mandavi, Lohit and Chandrabhaga share features in architectural design. The architectural design of these buildings does not deviate totally from the above-mentioned hostels. They also taper upward from their expanded bases. The inward windows at regular intervals cast shadows in the same manner and give the structure an aesthetic beauty.

The third architectural pattern is to be found in Brahmaputra (fig.67), Mahanadi and Yamuna. The architectural design of these hostels is completely different from all other hostels mentioned above. Comparatively they have a simple layout and design as well as look. Among all the hostels, the Yamuna Hostel has a spectacular look with its beautiful garden, and is surrounded by trees and plants.

The other known structure on the campus is the stadium's Terrace-cum-Sports Office having a large open space for games and sports. It is also capable of accommodating a large gathering. The Terrace provides a sitting arrangement for the onlookers. The structure is solid but architecturally does not give an appealing look. The Student Activity Centre (Teflas fig. 53.) located near Narmada Hostel has a circular look from the front, that is clearly visible. This soundly constructed structure houses many student activities. The circular bands on the front delineate the two floors as well as give the structure its central architectural value.

There are many less known structures apart from the large number of Faculty Residences and Staff Quarters. These Faculty Residences and Staff Quarters are simple in design and form and share common features in almost everything. They are flat structures and do not have any zigzag patterns to generate any specific aesthetic effect for the simple reason that they are to be used for residential purpose.

In conclusion, JNU campus architecture represents the educational objectives and academic ideals under which any university operates. The academic structure finds its commensurate reflection upon architectural design. Here the campus architecture establishes a social and functional relationship amongst the university community engaged in the pursuit of knowledge and wisdom. It illustrates the feature that the organization of knowledge has a relationship with the organization of space. Since ideas and objectives are not

static, so is building design flexible in the successive phases. The physical planning of the campus is related here with the academic planning and philosophy. The broader culture of the country and the society as well as the broader meaning of education is represented by the architectural design. Many of the cultural centres/student activity centres represent the broader culture of society. There is not a single cultural motif in the architectural design, which can be cited to represent any particular religion, culture or social group. Thus, JNU's architecture represents a universal culture and endows it with a universal socio-cultural meaning.

CHAPTER IV

CONCLUSIONS

4.1 Similarities and Dissimilarities between the Two Universities

There are similarities and dissimilarities in the nature, role and functioning of universities. There are some inherent similarities, for instance most universities are institutions of higher learning engaged in the pursuit of knowledge. The differences amongst universities lie not in the essentials but in the emphasis accorded to certain functions depending on the needs of the time and the place. The two universities, Jamia Hamdard and JNU, are thus quite similar and dissimilar.

4.2 Similarities:

1. Both the universities are located in the same socio-cultural, geographical and climatic region; that is Delhi, the capital of India.
2. Both are located in sylvan surroundings away from the din of metropolis.
3. Both are located on the ridge of the Arravali.
4. Both of them share a common historical place, once governed by Tomar Rajas. This is also true that both universities are located nearby Mehrauli, a medieval historical site.
5. Both the universities are campus universities and do not affiliate colleges.

6. Both the universities emphasize not only the teaching functions but the research function of the university as well.
7. Both the universities are residential universities.
8. Both the university campuses are located in natural settings. Man made elements such as buildings, roads etcetera, have been carefully introduced into the fabric of the campus.
9. Both the university campuses and their buildings share a modern architectural design.
10. Both the universities emphasize interdisciplinary approaches to the pursuit of knowledge and this is reflected in their planning and architecture.

4.3 Dissimilarities:

1. The two universities have historically different backgrounds. The history of Jamia Hamdard goes back to 1906 when Hakeem Hafiz Abdul Majeed established a small Unani clinic. The beginnings of Jawaharlal Nehru University do not go beyond 1960s.
2. The campus of JNU is much bigger than the campus of Jamia Hamdard. JNU covers nearly 1000 acres of land where as Jamia Hamdard possesses only 90 acres of land.

3. The kinds of land on which two universities have been established differ in their locale. The JNU campus is on a more rocky land as compared to Hamdard's.
4. There is less variation in the architectural design of buildings of JNU. Many of the buildings in the campus share common features. There is more variation in the architectural design of buildings of Jamia Hamdard. Almost every building differs from other in its architectural design.
5. The campus of JNU is more planned according to the stated academic objectives and ideals; whereas the campus of Jamia Hamdard is less planned. The reason is that Jamia Hamdard evolution has been uneven, whereas JNU did not see such uneven development.
6. JNU is a central university where as Jamia Hamdard is yet to become a central one.
7. The effort to establish Jamia is primarily a one man show, i.e. the zeal and enthusiasm of Hakeem Abdul Hameed led to its establishment; whereas JNU was conceived through a more collective effort.
8. In the case of JNU the disciplinary growth is reflected in a movement out of a central core area – a plaza dominated by the library Tower. But in case of Jamia Hamdard the campus does not seem to grow from the core area. The core of the campus in Jamia Hamdard is the playfield.

9. The architectural design of the JNU campus and building represent a universal culture, a culture of India and of the world where as the architectural design of the campus and building of Jamia Hamdard represent the culture of India as well as Islamic culture, the culture of the Muslim world.

4.4 Conclusion

The aim of the study is to understand the relationship between the ideals of knowledge and university architecture and to explore how models and ideals of education are reflected in the planning and architecture of the university. In order to understand this it is the first step to elicit the nature and function of the university. There are differences of opinion among the scholars regarding the nature and role of university. This is due to the cultural context and the way the universities evolve with passage of time.

Etymologically, the university conveys a sense of universe which is entire or whole world of experience, philosophically it comprises a community of scholars engaged in pursuit of truth and academically its definition varies according to continental/regional emphasis on particular structures and functions. Some of the classical works on the subject are that of John Newman, Abraham Flexner, Jose Gasset, Karl Jaspers and others. Newman focuses on cultivation of mind and sees university as a place of teaching universal

knowledge whereby imbibing respective values, men will be able to serve the society in better ways. Flexner's thought highlights four important points: (i) the conservation of knowledge and ideals, (ii) the interpretation of knowledge and ideas, (iii) the search for truth and (iv) training of students who will transmit the values and cultures. He emphasizes on advancement of knowledge. Gasset emphasizes on three functions of university: (i) transmission of culture, (ii) training in professions and (iii) scientific research. Whereas Jaspers considers the university as community of scholars engaged in the task of seeking truth. He distinguished the three function of university as (i) research, (ii) transmission of learning and (iii) education & culture. Cyril James includes: (i) teaching, (ii) conserving existing body of knowledge or reinterpretation and (iii) research or discovery of new knowledge.

Among the prominent Indian educationists who have given their thought on universities are Rabindranath Tagore, Dr. Radhakrishnan, Dr. Zakir Hussain and Pandit Jawaharlal Nehru. Tagore's thought have its living relationship with the university which he has established at Shantineketan known as Viswa-Bharti signifies a place of universal knowledge and world culture. The primary function of university according to him is to bring the constructive work of knowledge for intellectual exploration and creation. Accordingly, a university should be a meeting ground for different cultures in a common fellowship of learning and common spiritual striving for unity of human race. Radhakrishnan's view on

function of university is that the universities are not merely places of learning rather they are the homes of culture, their function is to foster world loyalties, a sense of moral value, a faith in human spirit and ideals. Dr. Zakir Husain's thought on the function of the university is that the approach of the university's work is to change the methods of passive receptivity to active participation, discipline and purposive intellectual work. He maintains that the university has to illuminate thought and action. Emphasising on the need of planning he says that there is a need for educational, economic and academic planning should be done by the university itself. For Nehru, the university is essentially a place of culture. He stresses on the development of integrated view of life at the universities. He takes a humanist view of ideas and search for truth as objectives of university.

There is a need to redefine the role, purposes and type of education the universities offers particularly keeping in view that education has not been able to fulfil its lofty goals of providing simultaneously practical skills, social homogenization and a basis for cultural identity in a proper fashion.

The cultural motifs undergo changes in the light of changing experiences. Design can provide an effective vehicle for communication of meaning. The architectural form is the expression of society's understanding and ideas as they are operating at particular time and place. Good building design in higher education sector is not just about making the educational environment more

attractive but also to serve the need of the institution while linking it with the wider community and society. It is a social document that represents intellectual enquiry and ideals of higher education. A university campus should ideally a comfortable zone far from normally busy, noisy, congested world. The ideas introduced to students at the university remain influential throughout life as it encourages social relationship of all kinds in different activity centres to culturally enrich the university community as a whole.

The quality of academic programme is most important but that depends upon the quality of campus environment. Designing a vibrant university campus environment requires an approach that satisfies the demand made upon it including satisfaction of aesthetic need. Buildings are the primary consideration for campus design followed by exterior spaces and finally supporting site elements to be integrated into the total fabric.

To design a university requires a philosophy in order to satisfy the needs and objectives stated in academic plan. Such philosophy is guided by physical as well as non-physical component of design. All that is also determine by the climatic condition. The visual appreciation of the buildings and spaces as well as landscaping is another criterion for campus design in order to fulfil the aesthetic needs.

Two universities under case study have different historical background. The growth and evolution of the two universities finds its commensurate

reflection on subsequent development of planning and architecture. While growing and changing meeting all the demands made upon it both the university campus has taken new looking with the careful addition of new structures in congruence with wholesome beauty.

The campus of Jamia Hamdard began to take the concrete shape only after 1989 when it was declared deemed university. The uneven growth of this university is reflected in its planning also. Despite of this uneven growth the care has been taken to introduce the structures as and when the demand made upon it with the expansion of academic programme. The way knowledge has been organised into seven faculties finds its corresponding reflection in the planning and architecture of the Jamia Hamdard. The enshrined interdisciplinary approach particularly in the field of health and health related programme of study has given a due space in the campus plan. The serenity, the natural setup, the innovative building design, the design of exterior spaces, the integration of supporting site element in congruence with an aesthetic appeal all endow the campus with an environment suitable for learning and conducting research.

The architecture form of Jamia Hamdard provides variety of taste as each building is designed in different architectural pattern. The culture of the university community and its linkages with wider community find the expression in building architecture. The contribution of Islam and Islamic

culture. finds its expression in many of the buildings as many Islamic cultural motifs are embedded in architectural form.

The campus of Jawaharlal Nehru University takes shape according to the stated academic programme. The stated academic philosophy has given way to prepare a campus Master Plan. The Master Plan is being followed while adding any new structure in the campus as and when there is a demand for it. But there are instances when the Master Plan copy is not properly being followed.

One of the striking aspects of JNU campus is the growth of the campus from its core dominated by Library tower, followed by series of school buildings. The stated academic philosophy of interdisciplinary approach particularly in the field of Social Sciences and Languages finds the commensurate reflection in the planning. The way knowledge has been organised into different schools finds the correspondence in the organisation of space. One of the important aspect of the JNU campus is its natural setup. All care has been taken not to destroy its natural beauty. The buildings, the exterior spaces, the roads, the pathways, the services- sanitary, electrical, water etc.- all amalgamated into the total fabric of the campus environment gives a beautiful look.

The other fascinating aspect of JNU campus plan is the complete separation of living and learning units. The student hostels have put up side by side with faculty residences in order to maximise the interaction between faculty and

students. This socio-cultural interaction has further being encouraged in different activity centres to enrich the university community as a whole.

Keeping in view the existing site the architects of JNU has evolved a creative synthesis in the building design. The sound and functionally planned buildings completely integrated with the natural environment appropriate for human use. The noticeable arrangement of creative school buildings in purportedly flare form gives an expansion of unbound knowledge. The flexibility in building design represents new ideas of society. JNU's architectural forms are the representation of broad Indian culture and the culture of the world.

Thus, both the university has natural setup. The serenity, the greenery, the innovative building design in urban form, the exotic beauty provides a peaceful environment for learning and conducting research. The models and ideals of education find its corresponding reflection in the planning and architecture of the two universities.

The study undertaken is premised on the very idea that education is no more confined to the four walls of a room. Scholars such as Sheldon Rothblatt point out that the idea that beautiful surroundings are conducive to the pursuit of knowledge is of recent vintage. This study strives to connect the knowledge ideals of the university architecture with its architecture and to identify how aesthetically designed buildings influence the milieu of the university. This is a case study of two radically contrasting universities based in the capital city of

India. They are physically located in the southern part of the city. A similar exercise can be undertaken with an Indian and an international university. The study reaffirms the need of academic architecture to become more innovative at a time when disciplines are proliferating and questions of quality become central. University architecture can play a pivotal role in the age of globalization in symbolically providing a setting for the pursuit of knowledge by combining cultural values with an aesthetic sensibility. Professional architects have a significant role to play in this arena and therefore they in turn would require new sensibilities.

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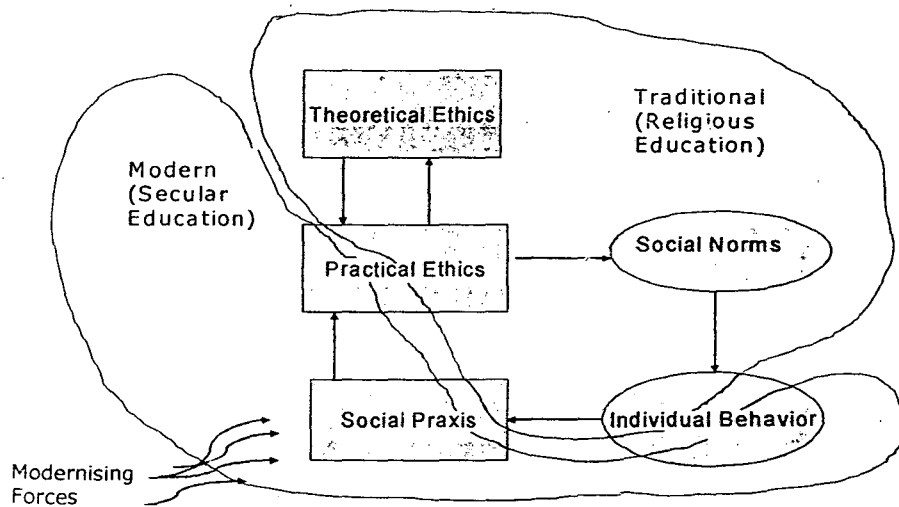


Fig. 1. Dichotomy between the Traditional School System and the Modern Formal one.

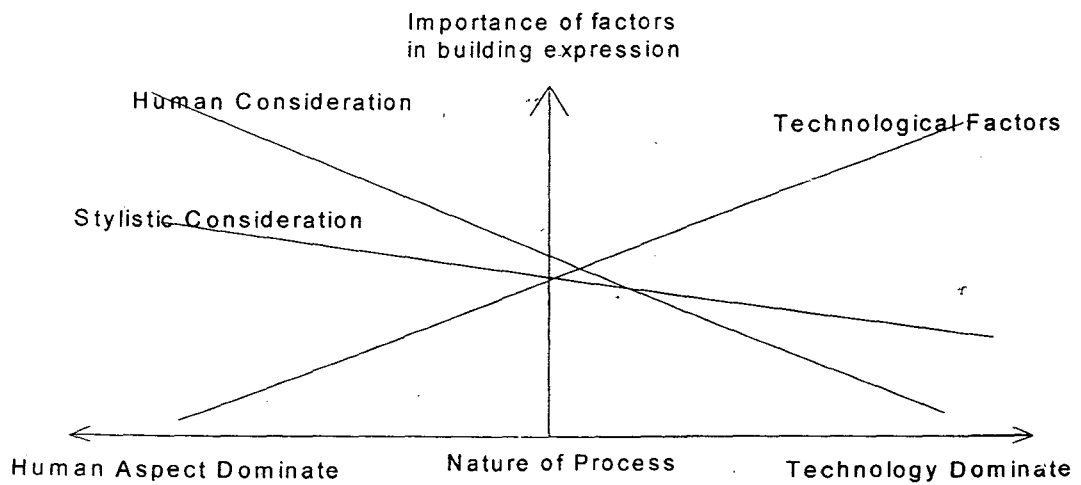


Fig. 2. Degree to which human or technical factor control the nature of design.

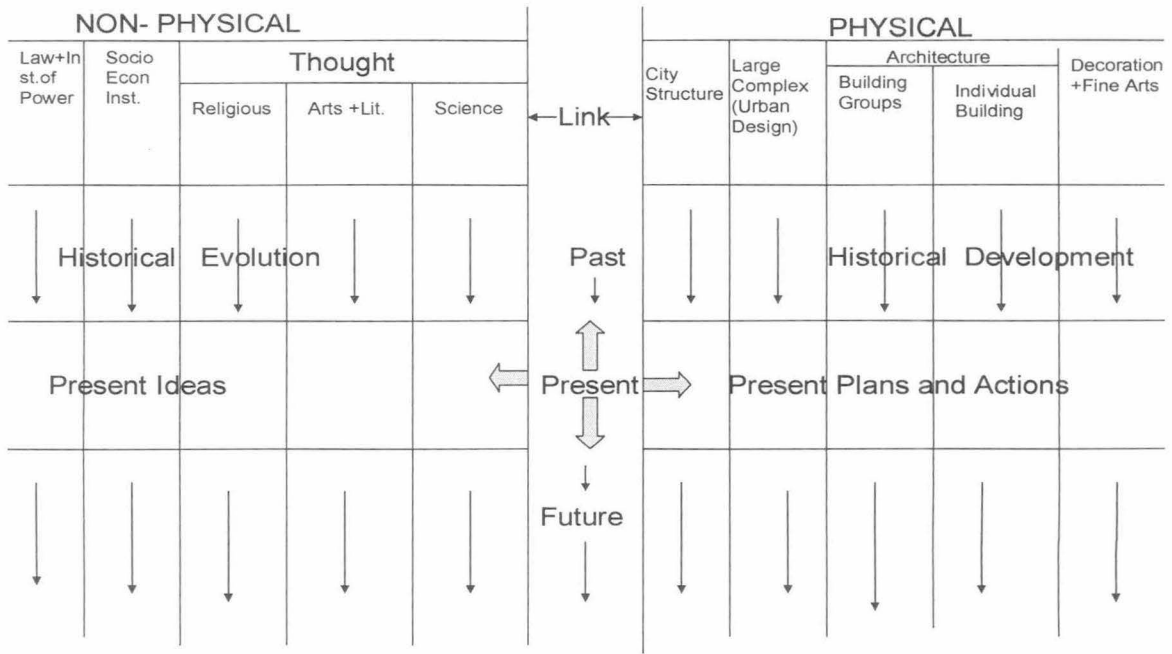


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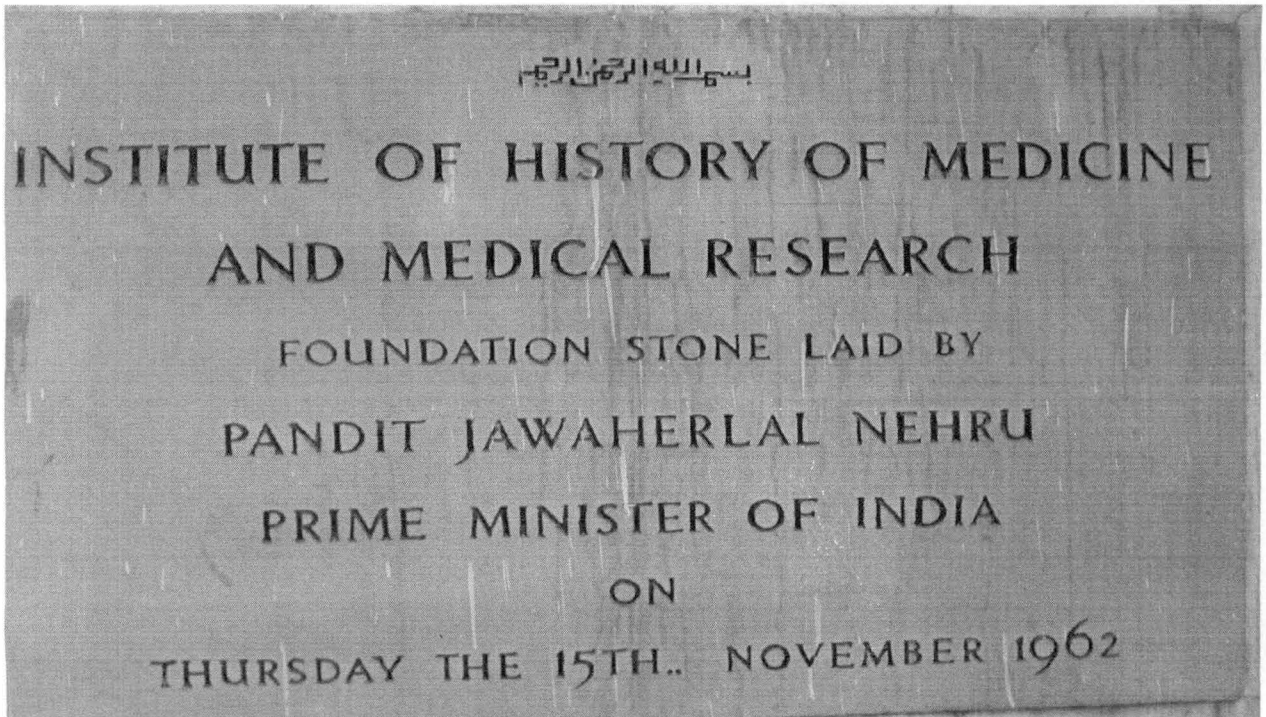


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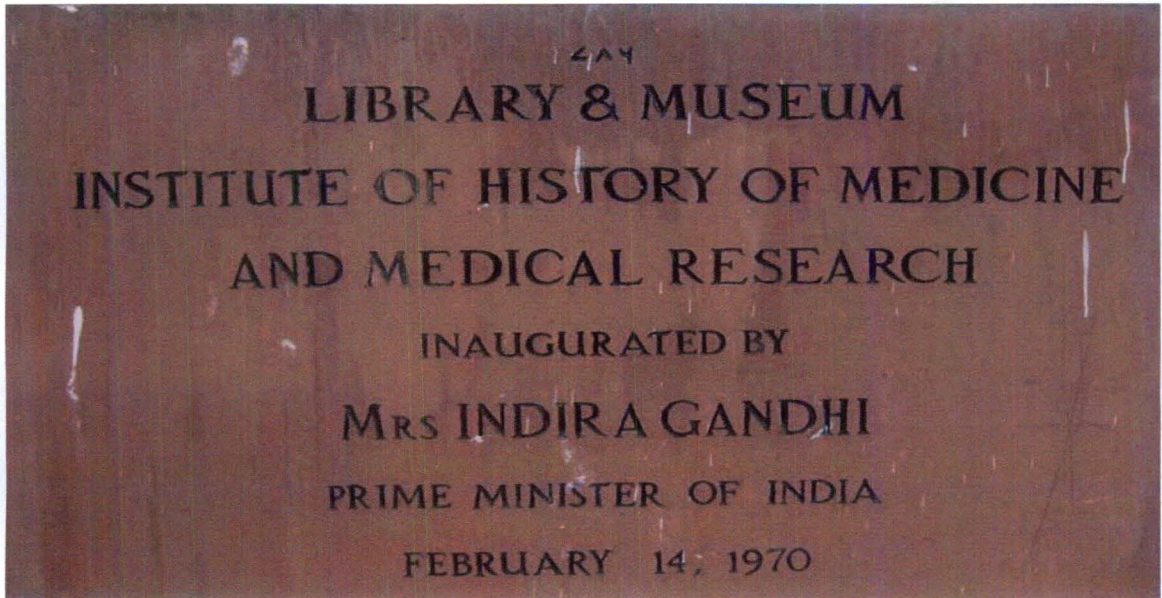


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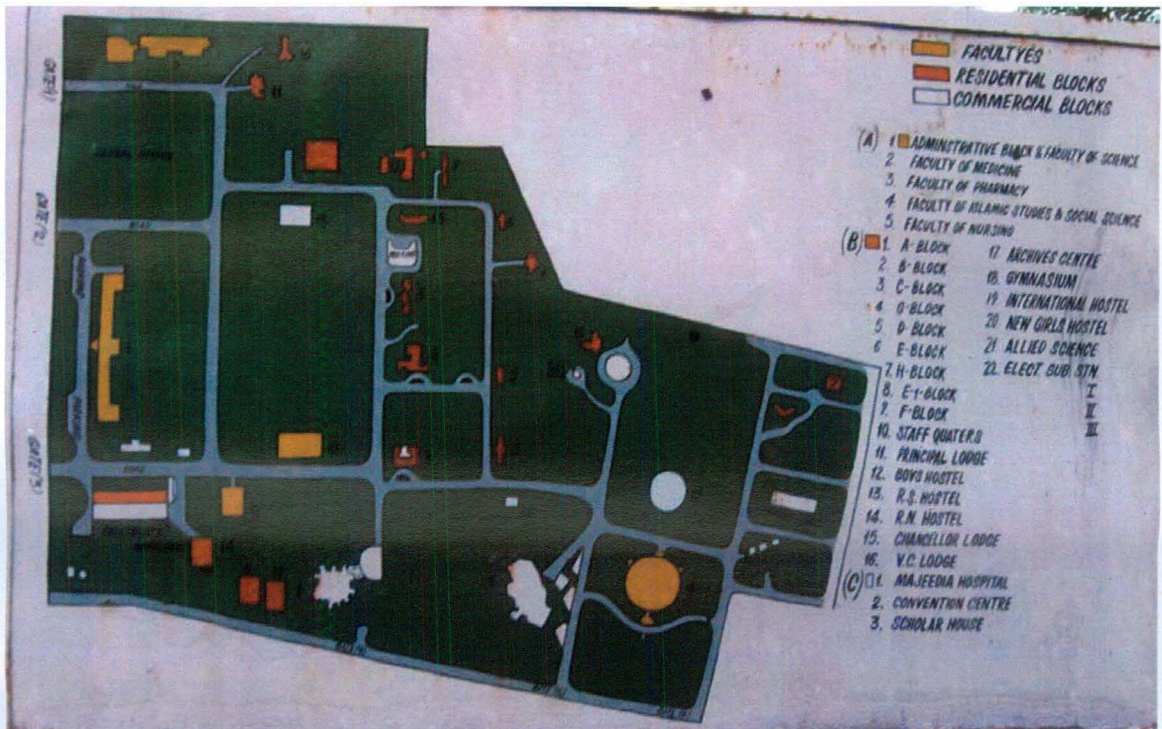


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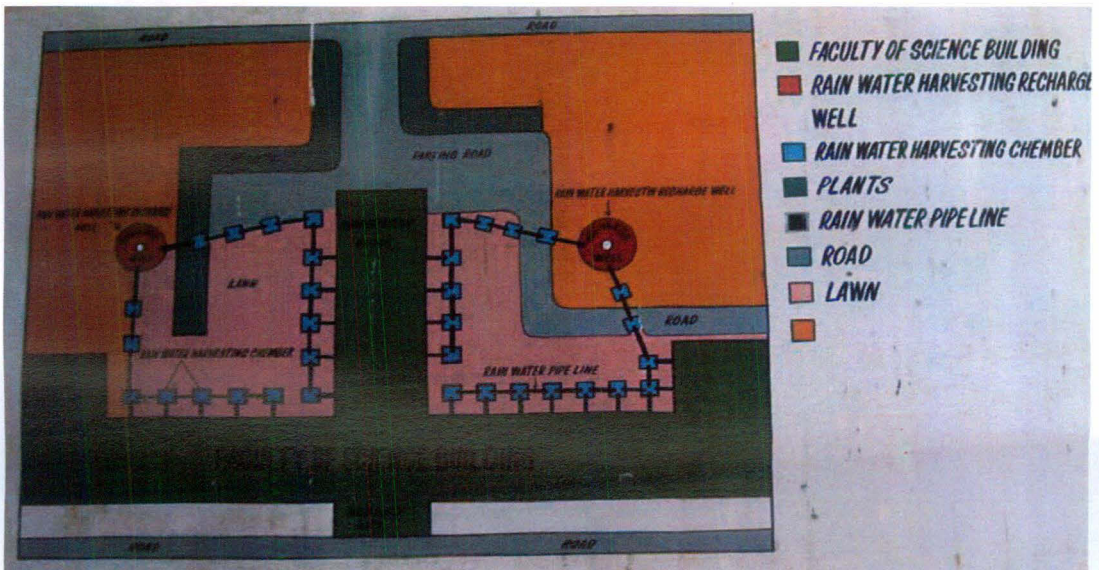


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Fig.22. Research and Archives Centre, Jamia Hamdard.



Fig.23. Faculty of Allied and Health Sciences, Jamia Hamdard.

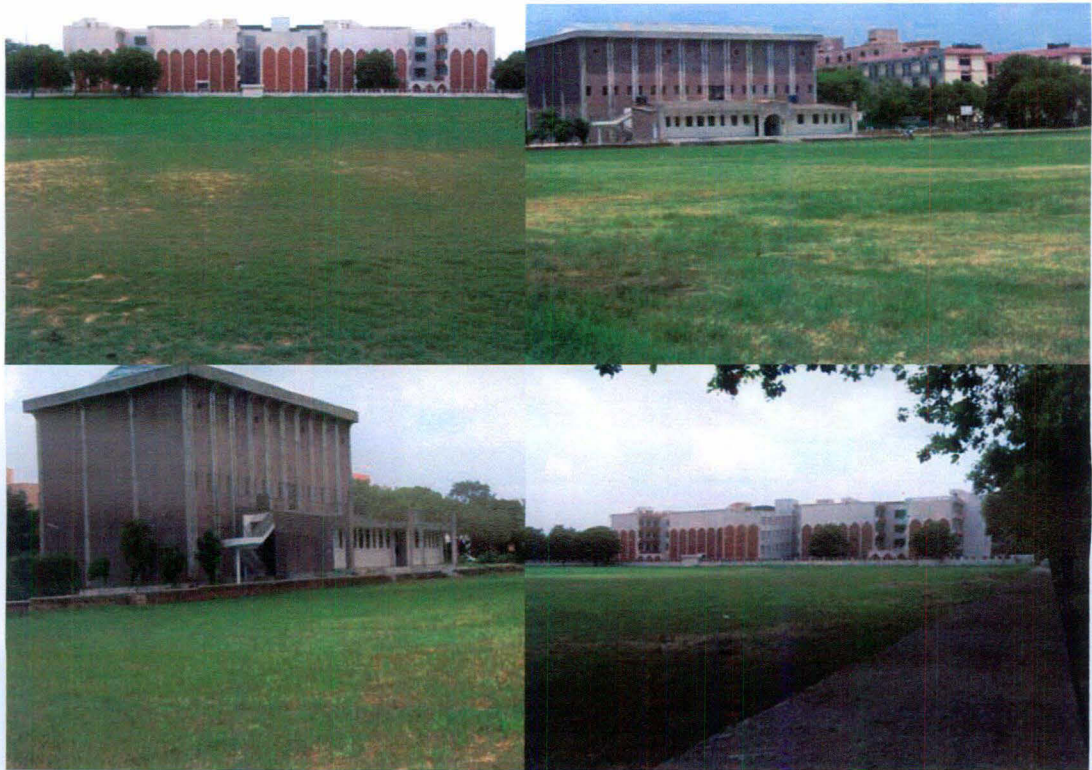


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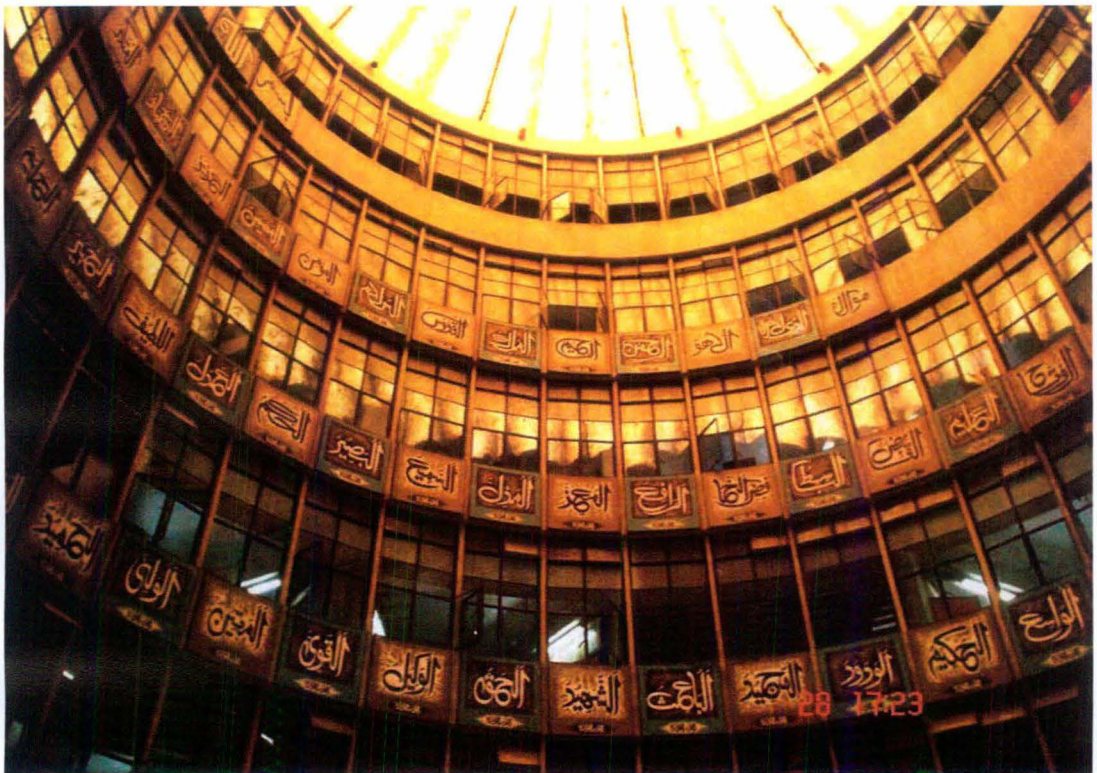


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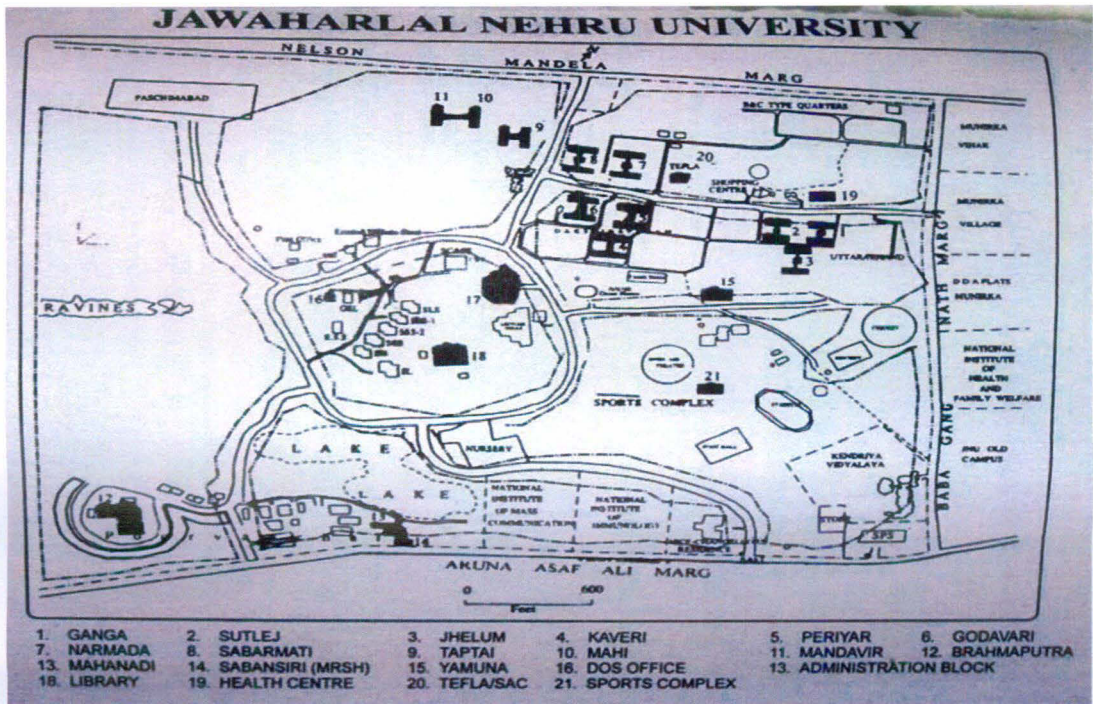


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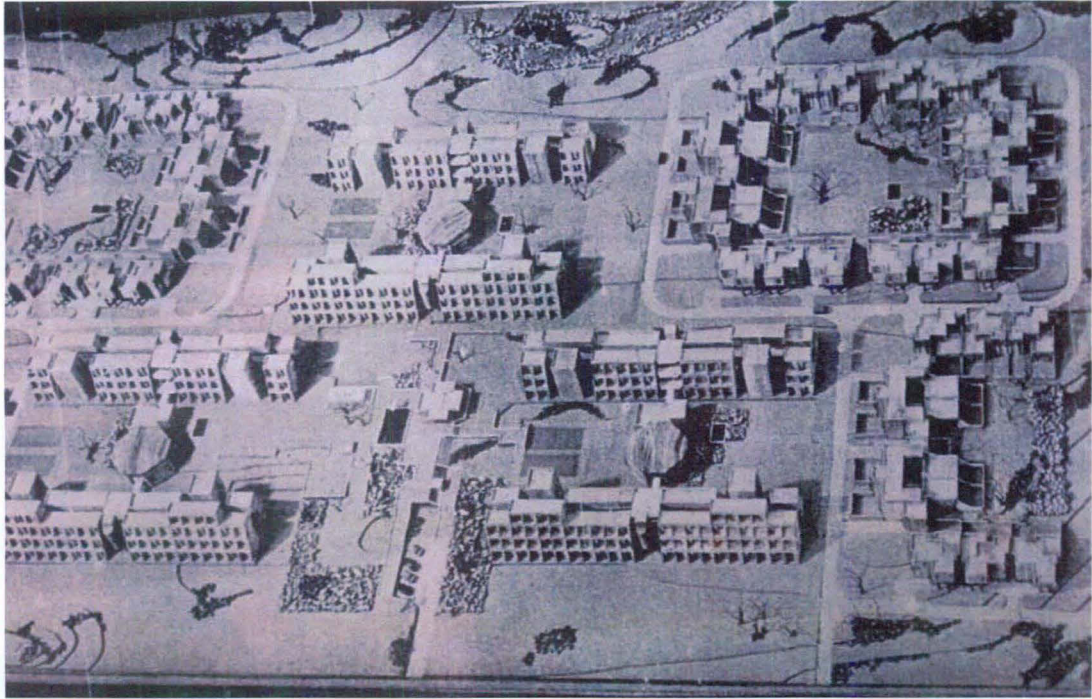


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