

## **The purpose of a university**

K.R. Sreenivasan

Director, ICTP, Trieste

### 1. Introductory remarks on the context

Honorable Minister, Mr. Nadim Tarin, distinguished colleagues and Ladies and Gentlemen:

I am happy to be speaking at this meeting in which the idea of creating a new private university in Aligarh is being discussed. I gather that Mr. Nadim Tarin is instrumental in originating this discussion. Professor Siddiqi has praised Mr. Tarin's philanthropy, humility and thoughtfulness. I believe that the combination of these qualities with genuine wealth is quite uncommon. I know that Mr. Tarin has a special interest in Aligarh city because that is where he grew up. It thus seems natural that he should desire to set up a modern university here. With this in the background, I wish to say a few words about the purpose of a university and things that one should broadly do in this particular instance. Clearly, I cannot be too specific given the general nature of this meeting.

Perhaps I should also say some specific words about my visit last year to Saudi Arabia, which is where Mr. Tarin is presently based. I had the opportunity there of addressing

high school students who are the children of expatriate Indians, almost entirely Muslims. In this school, some 6000 girls and 6000 boys study under the guidance of a dedicated Principal and a number of teachers, all of whom are Indian. The girls and boys are organized in separate schools, of course, and, in particular, I have never in my life before seen so many young girls ranging in age from something like 6 and 18 years of age under one roof. I was quite moved by that meeting. These students are excellent by most usual measures of educational assessment but have limited access to higher education in Saudi Arabia. I understand that one of Mr. Tarin's intentions is to provide educational opportunities for some of these students for whom they would otherwise be closed in Saudi Arabia. On the other hand, I have learnt that the university will be open to merited students from all walks of life. This is essential for its success.

## 2. General remarks about universities

Universities have been with us for centuries. As examples, the University of Bologna is one thousand years old, Cambridge University started 800 years ago and Harvard University about 360 years ago. If we look for inspiration in the East, Takshashila and Nalanda were great centers of learning, the former before Christ, and the latter starting in the 5<sup>th</sup> century AD, lasting for some 600 years. Today, as we are contemplating a new university, it is useful to ask about its purpose, and also ask if we may learn anything from these venerable institutions.

In some respects, universities have remained unchanged from when they came into existence first. They are communities organized around learning, often as residential centers. Students study and professors teach. Professors are often masters of a chosen subject and have the knowledge and insight that may be the best in the world. Professors organize instructional programs, but the key responsibility for learning rests with the students.

Yet, in some respects, the universities have changed a lot and could not be more different now from the old days. In the past, universities were primarily concerned with educating a privileged few; now, in most countries across the world, university education is regarded as the right of all citizens. Universities in the past were described, often disparagingly, as ivory towers engaged in intellectual pursuits disconnected from the real concerns of day-to-day life; today, on the other hand, universities equip students with social skills necessary for life and, at least for some, for starting major technical and professional careers. The skills obtained in a university are now expected to be essential for a student to develop confidence in his or her capabilities for meeting new challenges as they arise. The focus is the process of continual learning, with the specific subjects studied at the university serving merely as examples. The pace at which knowledge is being generated is so rapid presently that life itself has now become a long learning process. Only some 150 years ago, in his book "The idea of a university," John Henry Newman was to claim that doing research was not the province of a university but of academies such as the Royal Society. Now,

all well-known universities of the world have seamlessly integrated teaching and research; it is in this integration that they seek strength.

But another important dimension of a modern university was not regarded as essential some 150 years ago, when the universities of Madras, Calcutta and Bombay were started in India. The application of knowledge for one's own intrinsic growth (or that of a field of study) is seen today, at least in some general sense, as a means for contributing to the benefit of the society at large. While only a fraction of people receives instruction within university halls, it is now acknowledged that others too should benefit from the fund of knowledge and creativity of the university community. The university must put its assets, both tangible and intangible, in the service of the public. The knowledge and research skills of the faculty and staff should be available, on campus and throughout society, to aid public offices and private citizens in solving common problems. In short, universities should have a wide participation.

The university, then, is a community of men and women devoted to the preservation and increase of knowledge, as well as its dissemination; it is about the training of young minds to think so that they may learn how to tackle new problems as they arise. Learning to be a continual learner is a goal of modern university education. This is what enables a student to innovate continually in life.

There is a fourth element as well. Good learning increases, minds remain creative, and knowledge is turned to useful purposes only if men and women are free to question, free

to seek answers, free to learn, and free to teach. Openness to new ideas and methods is essential. The university must therefore support and defend intellectual freedom.

In summary, a university serves the function of teaching, research, innovation and public service — all of them occurring in an atmosphere of intellectual freedom.

### 3. Public and private universities

In recent times, with the dominant exception of the US, most universities are supported by public money. This practice has gone hand in hand with the wider participation of the community. Roughly speaking, rich countries have more impressive public universities, and serve increasingly diverse functions. They are broadly accountable to the public — because of their venerable history — though their freedom is assured to a significant degree. This freedom is justified on the whole because of the knowledge base that universities provide for the whole society, with benefits that can be measured often on longer terms.

In a totalitarian system, such as the former USSR, or even present-day China, even a few can pursue their interests without paying a heavy price. In democratic societies, there is always a tension between the pursuits of the few and the interests of the many. In the US, for instance, about which I know well, there are the elite private universities, in one of which I taught for some 22 years, which take (generally speaking) the best students possible and recruit the best faculty available. They have no special obligation to admit students from a particular State or a specific minority

groups (although they strive to be responsive to such issues). On the other hand, the State universities do have an obligation to admit students from the State that funds it and, in general, cannot opt for the “merit-only” philosophy. Yet, within their own constraints, they, too, strive to get the best students possible and appoint the best professors possible. The superior material wealth of the country enables it to compete for the best talent from anywhere. It is quality, and quality alone, that build the reputation of a university in the long run.

In India, a small number of elite institutions such as TIFR, IISc and the IITs have enjoyed relative affluence, especially in the last few years. On the other hand, even those universities which have had illustrious histories (such as your own) have fallen on hard times; many of new universities were created by upgrading smaller colleges without, however, providing adequate support. Politics often loom large, and research culture is a hit-and-miss affair; those few faculty members who are engaged in it cannot perform at competitive levels because of their heavy teaching loads and poor incentives. This declining state of the university system has been discussed at length within the country and various remedial measures are being contemplated. The problem is the massive amount of infrastructure and the large number of creative people needed to set the situation right. Without rectifying the university system, even India with its vast reservoir of human potential will deplete its pool of talented people.

It is, however, very expensive to upgrade all universities in the country. Given the huge demands on the public exchequer and the difficulties of meeting them, it is indeed a great idea to think of a high-quality private university.

A university should obviously have excellent physical facilities such as first class buildings, library, lecture halls and seminar rooms, gym and sports complex, and so forth. It should also have fast internet connectivity, access to modern information base and knowledge. These are expensive propositions, yet, they are the easiest to accomplish. What will be much harder to do is to establish strong academic traditions where students and teachers alike do not opt immediately for the easiest route of passing examinations without inculcating the qualities I have described above. The university should be of high caliber; without which it loses all meaning. While departments and fields of study can be added one at a time, the tradition has to be built up without let up from the first day — not something to be added on later. In this connection, it will be essential to have some strong connection with a well-known university or educational institution in the country itself or from abroad.

As I already said, it is necessary to build up the university over time, and fields of study should be added with due deliberation. I understand that the interest here is to build the university on the basis of modern subjects such as informatics, biotechnology, nanoscience, material science, environmental sciences and other interdisciplinary topics such as financial mathematics. I imagine that Bachelors and

Masters Degrees in such areas will be developed. This is certainly a laudable goal because there are not that many universities offering such programs, but I wish to make a few observations.

First, before the students can be expected to be effective in interdisciplinary areas, they should acquire some expertise and competence in disciplinary areas such as mathematics, physics and biology. The sound basis they acquire in basic sciences is to be regarded as the down-payment for their later work. Second, in the modern world, it is essential to learn to communicate well with the larger society, in both spoken and written word, and to be able to articulate one's views and results logically without rancor or emotion. This skill should be a part of the tradition which the students ought to acquire in a university. My third point is that the students must be able to discover for themselves their strengths and augment them through instruction in the university. After all, not every one is suited for the same task and different people will have acquired different types of inner strengths by the time they become university students. Fourth, the reputation of a university is made by the combination of two elements: the types of students it produces and the contributions they make to the society and the type of new ideas it generates. By and large, the latter is the domain of the faculty and advanced students. It is therefore essential to attract excellent and dedicated faculty to the university, at least some of whom ought to be world-class, right in the middle of creating new "things".

## 5. Conclusions

I applaud the idea of a new private university in India that is open to all, even if it may provide a special place for certain minority students. Its openness is what guarantees its strength. The time is ripe for such a university because the society is turning more and more to modern knowledge that transcends regional and national boundaries. If it wishes to develop some international connections, I shall myself be happy to be of some help. However, unless the university is of high caliber, and allows its students to explore their potential properly, the opportunity will be wasted. I am pretty certain that no one here wishes to be part of such an enterprise which simply adds to the many problematic institutions which this country possesses in abundance.

Thank you for your attention.