Committee IV
The Modern University in Transition

DRAFT--6/15/92
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THE INTELLECTUAL, MORAL AND PROFESSIONAL VALUES IN THE FACE OF THE MODERN UNIVERSITY IN TRANSITION

by

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The Nineteenth International Conference on the Unity of the Sciences
Seoul, Korea August 19-26, 1992

Abstract

The University is the driving force and the consequence of the process of rationalization which began in the first centuries of the second millenium of our era in Europe and which will have embraced the whole world by the 21st century. Therefore the intellectual, moral and professional values in the face of the modern university in transition can be traced back to the two fundamental demands which have confronted universities ever since their very beginnings: on the one side, the advancement of scientific and scholarly knowledge, on the other the training for the professions which require scientific and scholary knowledge for their practice.

The first three paragraphs give of survey of the traditions which have established the fundamental intellectual values of the modern university. The second three paragraphs deal with the moral values which are important for the task of the modern university by focusing on the academic ethic, i.e. the professional ethic of the university teacher. The seventh paragraph mentions the importance of humanistic education in the university as a means for the formation of human values in a pluralistic society.

1: The university as the consequence and driving force of the process of rationalisation in modern societies

The origin of the universities at the end of the 12th century bore the marks of the two fundamental expectations which they have had to face ever since.[1] On the one side, the universities were expected to engage in fundamental discovery and in criticising and extending the traditional view of the world. On the other, they had to train persons who would enter the intellectual-practical professions to deal, in an intellectualy disciplined way, with social and political problems. These two apparently mutually contradictory demands were fulfilled in institutional form in the two oldest European universities. The demand for training for the intellectual-practical professions was met in Bologna; the demand for the disciplined intellectual understanding of the world was met in Paris.

What was it in the 12th century which led young men from the ruling strata of the various European societies to undertake the arduous and costly journey to Bologna where they would spend years in the study of abstract propositions contained in old legal treatises? It was obvious that the complexity of social and political problems had become too great to be dealt with by knowledge gained through apprenticeship and sheer experience of legal practice alone.

There were three reasons why the problems of European society had become more complex. For one thing, the movement of human beings and goods and the flow of information had

become so extensive that they could no longer be dealt with through the traditions appropriate to locally self-contained societies. These developments required that increasingly larger parts of the population must be capable of using money and reading and writing. Second, cities, being the centres of the money-economy and of the closely associated literacy of the urban population, also became the centres of economic power and of political and cultural authority. Third, the tensions between the cities and the feudal aristocracy, and within the cities themselves, between the old and the new political and economic elites, became so acute that the primordial social institutions and attitudes were no longer adequate for the maintenance of the social order.

The texts of Roman law, which had developed in a similar situation in antiquity, and which were discovered and put into the service of the empire and the papacy, were elaborated into generally valid norms for the solution of the newly emergent legal problems. They provided models for dealing with future development. The intellectual reduction of the complexity of social relations to the point where they could be dealt with by rationally intelligible and rationally applicable legal norms was a practical service for political elites in their efforts to maintain social order. The law schools, especially in Bologna, trained young men to perform such services. Bologna was from the end of the 11th century able to attract many foreign students, mostly of upper class origin; by the end of the 12th century, these students were in a position,

thank to their numbers and their prestige, to unite into corporate bodies- the universitates - for the representation and protection of their common interests.

In France, and above all in Paris, which in the 12th century became its political, economic and cultural capital, the competition among various schools, each of them under separate intellectual control, led to a concentration of distinguished teachers of philosophy and theology who attracted a large student body. These students sought and found in the teaching of these schools, methods by which to make rational sense of the complexity and contradictoriness of the affairs of their civilisation. They were especially interested in the problem of the truthfulness of traditional knowledge and dogma. Contentions for power between the papacy and counter-papacy and beween the emperor and the papacy, as well as the contradiction between holiness and the purchase of ecclesiastical appointments, between piety and worldliness, between the money-economy and the prohibition of usury, between the affirmation and the condemnation of movements of reform - all these conflicts and contradictions troubled the minds of intellectuals. The widening of the range of experience through the encounters with the Middle East, connected with the Crusades and trade, raised questions about the cultural and intellectual equality, or even supremacy, of non-Christian modes of life and thought. The ideas of Greek philosophy and science brought into Europe, chiefly from Arabic translations, raised questions about the postulates of

the Christian view of the world and encouraged the search for the underlying truths of rational and empirical knowledge. The success of the dialectical method by means of which this search was conducted attracted so many teachers and students that the Parisian masters of arts began, from the opening of the 13th century, to regulate the conditions of study and to form a corporate body of teachers and students, a universitas magistrorum et scolarium.

The foundations of universities in Bologna and Paris around 1200 and, shortly thereafter, in Oxford, Montpellier, Cambridge and Salamanca and, then, in about eighty other medieval cities over the next three centuries, would have been impossible if the central authorities - emperor, pope, and monarchs- had not been interested in them, taken them under their protection and assured them of a far-reaching autonomy in the face of the local authorities. They expected, as Emperor Frederick Barbarossa put it in 1155, that rational knowledge would, on the one side, illuminate the world, and, that it would, on the other, maintain the social order. The rational search for truth was thus seen to be connected with the intellectual training of a socially influential stratum. Accordingly, the central authorities assigned to the universities the right and obligation to grant, on their collegial responsibility, the qualifications which would meet these expectations and which would enjoy universal recognition.

The history of universities can be seen largely as a set

of processes of stabilisation, differentiation, narrowing, enrichment, amalgamation and polarisation of the two fundamental demands, namely the rational search for truth, and the intellectual training of political and social elites. These prccesses were both consequences and pre-conditions of the rationalisation of society, the beginnings of which underlay the growth of European universities, as we have delineated it here. Since then, thanks to the growth of science, the process of rationalisation has become very pervasive and, nowadays, it determines the various demands which the universities must attempt to meet.

The extension of the variety of experience and of the radius of influence has become world-wide. It now requires, more than ever before, rational information and rationalised communication. Literacy and money, which led in the Middle Ages to the changes in the social composition and modes of action of the upper classes, have become the most widespread instruments of communication and power. They have made possible the rational forms of economic activity, bureaucrativ administration and the rationalised exercise of authority which lie at the foundation of modern societies. If anything can be predicted with relative confidence, it is the further increase in the scale of scientific and scholarly research and professional training. This is a function of the multiplication of those "service occupations" which are concentrated on the processing of information and which require that even larger numbers of persons master the

rational use of symbols. Even more than in the high Middle Ages, these changes are caught up in severe political and spiritual crises which are not only not relieved by the growth of scientific knowledge but are, in fact, generated and made more acute by it. Thus the demands which are nowadays addressed to the universities and which will continue to be so, are extended and made more urgent by the permeation of scientific knowledge into all spheres of life. The universities in the twenty-first century will continue to develop only if they adhere to the fundamental intellectual and moral values which have been alive in them ever since its first establishment and which have enabled them to perform central services for their respective societies, while at the same time, maintaining themselves as centres of discovery and learning. Unless they can do the latter, they will not be able to do the former.

2: The University as an Open Institution

Admission: The demands of an open society and of a mobile population require the openess of the university, above all, in its admission of students. Universities arose in those fields of knowledge which were open to students capable of and desirous of intellectual exertion, regardless of their national and social origin. In the liberal arts and sciences, theology, law and medicine, admission were not restricted on the basis of patrimonial or guild connections, as was the case with regard to other fields which were not less important

socially like architecture, agriculture, and engineering. Because of these restrictions studies in those fields were for centuries excluded from the university.

Where the subject-matter favored openess, universities were, for about seven centuries, in principle open only for males. Until the 15th century, they were open only to Christians. After the Reformation, the applicants particular religious denomination within Christianity was a criterion of admission. The extent of openness of admission was a distinguishing mark not only of the degree of toleration in the environing society, but also of the quality of the university as well. This is apparent from the fact that even before the Enlightenment, Jews and adherents of diverse Christian churches and sects were admitted to Padua, Montpellier, Leiden and Basel. The movement towards openness was not infrequently blocked and sometimes reversed. One reversal of the openness of admission was the prohibition of attendance at foreign universities such as was imposed in Prussia until the reforms set in motion by Wilhelm von Humboldt around 1806.

The territorial mobility of students was characteristic of the universities at the origin and in the course of their expansion throughout the world. It has been indispensible to the growth of science and scholarship, and it undoubtedly will continue to grow in the 21th century. The universities had always had to cope with this situation. They will be able to accomodate themselves to the demands made on them only if they

continue to be open to all students and indeed become even more open to the admission of students from all parts of society and from all over the world, regardless of their primordial qualities. Their openness will be fruitful only if they apply exclusively the criterion of capacity for intellectual achievement in dealing with candidates for admission.

Appointments: Openness in appointments to the teaching staffs will be necessary to maintain and improve the quality of the intellectual response to the various demands which will be made on the universities in the foreseable future.

The decisive element in the constitution and further development of the medieval university was the recognition of the studium generale as a course of study which was recognised not merely locally but throughout all of Europe. This continent-wide recognition of the qualifications conferred by the study at the university rested on the postulate of the universal validity of intellectual truths, and their pursuit and transmission. These values were strengthened through their close association with the universities. Since that time, the affirmation of the universal validity of rational and empirical knowledge and of the value of the pursuit and transmission of intellectual truths have been the common tasks of the academic and the scientific communities.

The principle of openness to persons and ideas whatever their national origin has been repeatedly infringed on, both by the universities themselves when they wished to protect

themselves from foreign competition, and by governments when they have tried to suppress ideas of foreign origin or of dissenting beliefs. The University of Bologna sank, in the 15th century, to intellectual mediocrity because its professorships were restricted to citizens of the municipality and became practically hereditary. At the other extreme, the intellectual pre-eminence of many American universities is, in the last analysis, to be attributed to their policies of academic appointment through which they recruit their staffs, scholars and scientists of the most diverse origins and convictions, applying exclusively the criteria of their intellectual achievement and intellectual promise. In many parts of the world, we may expect that the 21st century will witness an increase in nationalistic and "racist" parochiality. It will be necessary to resist the influence of such sentiments on academic appointments if the demands which will be raised by the next century are to be dealt with in what will be intellectually the best possible ways.

Freedom of Communication: Without openness of communication and publication, the discovery and transmission of new fundamental scientific and scholarly knowledge will be greatly hampered.

The Latin Middle Ages for centuries adopted isolated fragments from the treasures of ancient thought for the enrichment of the Christian faith, just as stone blocks, columns and capitals of ancient buildings were used as building materials for churches and palaces. It was only in

the 11th and 12th centuries that the teachers of law, medicine, philosophy, mathematics and theology came to consider ancient works in their own right and to expand and develop the ideas of pagan thinkers as well as their own. That was a triumph for intellectual openness. Since then, academic research and teaching have been distinguished by the openness of the publication of their methods and results - in contrast with the secrecy of research which is sometimes required on political and economic grounds.

Secret research has certainly produced results of high scientific quality. Nevertheless, new fundamental knowledge requires open discussion, scrutiny, elaboration and extension once it becomes public. Sometimes the new findings have been suppressed by the ruling powers of society, but usually with very short-lived success. At the same time, it must be said that new fundamental knowledge can have lasting impact only when it has been produced and transmitted in established and respected institutions such as universities. The heliocentric view of the cosmos, although it was already discovered in the 4th century before Christ, became established only 1800 years later when the universities of the Middle Ages and humanistic academies became the sites of the open investigation and transmission of new knowledge.

3: The University as an Ivory Tower

Since the last century, the university has often been accused of being an ivory tower: It has been regarded as unworldly. It

has been accused of arrogantly cutting itself off from society. In the 12th century, the ivory tower was the place where redemption was hidden, not in order to separate it from the world, but in order for it to mature into a force to redeem the world. Thus, the Virgin Mary who bore the Saviour in her immaculate womb until he was born as a human being was compared with an ivory tower.

In the Middle Ages, it never occured to anyone to associate the university with an ivory tower which was a symbol of purity and a promise of redemption. The disorderly and noisy activities of students and teachers were the very opposite of serenity and purity. It was for this reason that the founding of the University of Paris was officially designated as a reformatio, and in many places the municipal officials responsible for the university bore the title of reformatores. Universities have never been entirely quiet and withdrawn places, cut off from the world around them and from ordinary human distempers. Nevertheless, the image of the ivory tower is not wholly without some applicability to the university. The symbol of the ivory tower refers to important university values.

Disciplined leisure: The fundamental task of the universities is to strive, in a concentrated way, for rational knowledge and education; these require a publicly acknowledged area of disciplined leisure.

The academic degrees of baccalaureus, magister and doctor are evidence that the tasks of the university fall into the

category of the vita contemplativa, the bios theoretikos. They testify to the fact that the person who bears one or an other of those degrees has learned, to the appropriate stage, the methods and substance of a particular scientific or scholarly discipline so that he is in a position to teach that subject. Basically, the university awarded and still awards no other professional qualifications than those of a scholar and teacher. This also applies to the medical and legal professions whose practice has to be authorised by public or professional authorities; although universities teach medical and legal and other professional subjects, the university degree is not a qualification for the practice of those professions. That has to be licensed by the state or by a professional association to whom the task of licensing has been entrusted by the state.

Scientific and scholarly knowledge and education entail a spatial and temporal separation from the world of practical affairs. Contemplative leisure is a category of conduct, which is not subordinated to any immediate ends. It refers to the Greek concept of schole, to the contemplative pattern of life in schools and university. In the 1970s, alleged theorists of education in Unesco and the Organisation of Economic Co-operation and Development, made propaganda for a radical change in the nature of higher education. According to the idea of "recurrent education", all human beings from the moment of their entry into working life until their end will shift between work and education at frequent intervals. The

universities would, accordingly, have to deal with the task of serving as a kind of filling stations which supply the necessary intellectual fuel for the next stage of the journey through life. The university is turned into a scene of continuous commotion rather than into one of disciplined leisure. Recurrent education is quite all right but it is not a surrogate for the concentrated and prolonged concentration to trying to understand fundamental things. It fails to recognise the fundamental fact that learning and practising the search for knowledge entails a process of maturation which requires time for calm reflection and freedom from distraction. Wilhelm von Humboldt (1767-1835) expressed it by the notions of *Einsamkeit und Freiheit*.

Already in the Middle Ages, the relative seclusion of those engaged in common learning and teaching of scientific and scholarly knowledge was recognised as providing the best preparation for the effort to deal rationally with publicly important tasks. Such relative seclusion is the necessary condition for the concentration of the mind on the training of social elites in accordance with a pattern which is open to new knowledge and new experience. The universities thrive when they are able to penetrate theoretically into the facts they discover and when they can place the striving for knowledge and the investigation in the centre of their work; for this they require a peaceful atmosphere. This was, to a considerable degree the case in the Middle Ages and the Renaissance; it was so again in the 19th century and it

attained an unprecedented force after the Second World War.

Intellectual Freedom: The freedom of science animates the university and has a powerful effect on its environing society. It is true that political freedom is not an absolutely necessary condition of scientific research and teaching. Advances in scientific and scholarly knowledge developed and was taught in the unfree political orders of the ancient Orient and in the closed medical guilds of antiquity, in the dogmatically restricted and intellectually controlled schools of the Islamic and Christian Middle Ages as well as in the age of European religious and political absolutism and there was a certain amount of research in scientific and technical subjects also in the totalitarian states of the 20th century. In the liberal democracies, scientific research which contributes to the growth of knowledge is also produced in laboratories conducted by governments and by private business enterprises which prescribe the objectives of research and which also sometimes place some restrictions on the freedom of publication.

Nevertheless, without intellectual freedom there can be no steady and concerted progress towards new methods and results of fundamental knowledge. Only persons who have inner and external freedom can subject successfully the principles of the ruling scientific and political authorities to criticism. Only in this way can more consistent solutions to intellectual and practical problems be discovered.

Political freedom appears less as an absolute condition

than as an animating power which stirs up scientific and scholarly activity. In this respect, the freedom of science and scholarship is closely related to political freedom. The appearance of freer societies and freer political orders in ancient Greece coincided with the emergence of scientists and scholars, who emancipated themselves from conventional patterns of thought and who, as investigators and teachers, tried to arrive at ideas about the natural and social world which could stand up to rational and open criticism. The same is true of the medieval cities, in which the freedom of the citizen and the municipalities were supported in substance and by the individual efforts of scientists and scholars who increasingly refused to submit to traditional authority. The liberal democratic societies of the last two centuries above all, owe their triumph to the atmosphere which constituted what we call the Enlightenment; the liberal democracies are indebted for their further developments to the freedom of science and scholarhip in the universities where their intellectual and political elites were trained.

Universities as Partners, Not Servants. The universities can best satisfy the expectations of the sovereign powers of society if they act not as handmaidens but as independent partners. Immanuel Kant was censured by his official superiors for his teachings. It was only with the reforms of Wilhelm von Humboldt that the autonomy of the university delivered it from its role as the servant of the prevailing religious and

political authorities and that it acquired, with the freedom of teaching and research, the dignity of an independent partner of state and church. This by no means contradicts the obligation of the university to train the persons who are needed for the services of society, state and church: rather it places the university in a better position to further the common good through its freely chosen studies and investigations and its freelyy conducted teaching.

Business enterprises have now joined state and church as major employers of university graduates and as the sources of financial support and they will do so even more in the future. It is not only in Great Britain that the universities are having to supplement the diminished financial support which they receive from the government through arrangements with private business enterprises and through the formation of "technological consultantships", "technology-parks", "innovation-centres" and by other such institutions for the transfer of technological knowledge from the university to private business enterprises. Private business firms also expect as benefits from their partnership with universities, the education of their prospective employees, the further training of those they already employ and the provision of economically useful knowledge.

Let me say a little more about what I mean by partnership: Partnership presupposes a fundamental consensus in the understanding of the world and of ones own actions. It is this relatively far-reaching identity of approaches to the world

which provides the basis for mutual understanding. The similarity of the problems they face should affect the relationship between the universities and business firms. They both seek to open up new realms in a systematic way, through rational means. Business firms seek new markets, new products, new techniques and new methods of marketing; the university seeks new fields of knowledge, new discoveries, new methods of research and teaching. Both try to face and reduce the uncertainty of the future by rational means. The universities attempt to reduce the indeterminacy of the unknown and the unusual through systematically formulated and tested theories; business firms attempt to do so through rational planning of the use of their resources to increase the probability of successful action. Mistakes in judgment lead a business firm to failure; in the universities mistakes can lead to the discrediting of a theory or to the demise of a scientific or scholarly discipline or the decline in the standing of a department or of an entire university.

This points to the second precondition for the effectiveness of the partnerhip between universities and business firms, namely the necessity of acknowledging their far-reaching differences. Without the difference and distinctiveness of their objectives, it would be meaningless to expect any mutuality -or complementarity - between them. The commonplace observation that economic activity belongs to the <u>vita activa</u> and academic activity to the <u>vita contemplativa</u> cannot be taken sufficiently to heart when one

thinks about the demand that the universities should become more practical in their objectives. Anecdotes reported about Thales - the first occidental scientist - stressed both his unworldliness and his capacity to apply -if necessary- the results of his investigations of nature. However great the technological and economic impact of scientific discoveries, it must be emphasized that the investigations of Faraday, Maxwell, Hertz and Hahn were guided by amor sciendi and not by practical objectives.

The university thus best meets the obligations of partnership with business firms, government and other important social institutions when it remains faithful to its traditional role as an "ivory tower", in which, as an institution of disciplined leisure, it discovers important facts, produces important theories and educates and trains individuals of high quality. It performs its proper function when it produces ideas and persons to reduce the range of the indeterminacy of events, and hence to reduce uncertainty and to cope intellectually and practically with unfamiliar events. The university thereby contributes in a fundamental way to increase the rationality of decisions under conditions of uncertainty.

4: The Academic Ethic

Thus far I have been discussing intellectual values which universities have developed in the course of dealing with their two main tasks, the advancement of scientific and

scholarly knowledge and the training for professions which require scientific and scholarly knowledge for their practice. The moral values which are necessary for the execution of these tasks are not exclusively or even primarely the domain of institutions; they are rather values which must be followed by individuals. Since the traditions of university teaching as a profession are the responsibility of the individual teachers, the moral and professional values of the university may be best discussed by focusing on the academic ethic, i.e. the professional ethic of the university teacher. They apply no less to students who seek to enter a practical profession which has a large intellectual component.

The professional ethic of the university teacher comprises the moral obligations and the pattern of conduct which grow out of his tasks and his standing within and outside the university. The conduct of scientific and scholarly research and teaching is governed by ethical norms, which are enforced not by external compulsion or through coercive means, but through the conscience of the individual and the opinions and beliefs which he shares which those in whose midst he lives. Professional conduct which is in conformity with the professional ethic depends essentially on the individual's own sense of responsibility, and on the solidarity and the social controls, derived from that solidarity, of the most immediate and the wider community of teachers and students.

Fundamentally, there is no ethic special to university teachers but the academic profession is under very exacting

obligation to meet very general ethical standards. University teachers suffer from the same weaknesses as other human beings and they are under the same obligations. But in addition to the fundamental moral standards which are incumbent on all adults, there are obligations connected with knowledge and with relation with young persons. As their knowledge increases, the moral expectations which focus on their professional activities also increase. For example, one cannot expect that university teachers will be more courageous in the face of external coercion than their fellow-citizens. If however they are not courageous enough to acknowledge their own mistakes and the truths discovered by others, when they are too cowardly to assert their own convictions and to stand up openly for scientific freedom, they fall short of their professional obligations.

The same is true for most other ethical obligations. There are certain nuances of these obligations which have a particular bearing on the academic profession. For example, special patience must be shown in dealing with younger scientists and especially students; special tolerance should be shown towards the scientific work of those whose interpretations differ from one's own. The scientist should be especially modest in what he says about what is worth knowing about the still uncharted and unknown; he should be especially reverent towards the rationally unarticulatable grounds and assumptions of his own way of looking at the world and of the ways of others.

Unconditional integrity in the search for and the transmission of scientific and scholarly truth is fundamental to the professional activity of the university teacher. Sound scientific and scholarly knowledge can be achieved only when the investigator is willing to subject his own curiosity to generally valid rules of methodical analysis and when he is willing to submit his own results to rigorous criticism taking into account all available and relevant data and possible counter-arguments against his own position. The scientific community must treat with contempt any fabrication or falsification of data allegedly obtained through experimentation or other types of investigation; it must denounce all dishonesty in the use of documents and quotations as well as the uncritical or partisan use of unsupported hypotheses.

The results of scientific and scholarly work must be published if they are to be assessed and if they are to enter into the body of knowledge accepted as valid and if they are to be taught. There may be cases in which a university teacher reasonably abstains from the publication of the results of his research. In very extreme cases, he may refuse to publish any new results for fear of engendering socially undesirable repercussions. But once he accepts the obligation of publication, he is intellectually responsible for what he has said. He cannot however be made responsible for all the applications of his knowledge, once he has made it universally available through publication.

5: The Academic Ethic in the University

The university teacher is a teacher first of all. The expansion of research in the modern university often makes it easy to forget what is obvious, namely, that the university teacher, even when he is conducting research, remains a teacher. The unity of teaching and research gives him more freedom in his teaching. It certainly does not give him a license to neglect teaching, for example, by shirking the presentation of introductory courses, reducing the number of lectures he gives or preparing them inadequately on the grounds that he is too taken up by his research or by the need to absent himself from the university for purposes of research.

Even though the university teacher no longer serves his pupil <u>in loco parentis</u>, he cannot divest himself of his influence over them as an example. Positively, he offers an example through his embodiment of the ideal of intellectual discipline in his teaching. The teacher must not crush his pupils under his superior knowledge but must rather take their questions and problems seriously. He must manifest in his teaching the virtues of intellectual integrity and of self-critical exertion in seeking the solution of difficult and important problems.

All individuals are equal in the face of the problems of science and scholarship. They must also submit equally to the criterion of validity.

Age, social status, sex, race have nothing to do with the assessment of the merits of the research of others and one's own. The recognition of the scientific and scholarly achievements of persons of a different outlook from our own, of those of different religious and political beliefs is a primary obligation of the academic ethic. The readiness to correct ones own mistakes in the light of scientifically persuasive data and arguments, regardless of who asserts them, is a corollary of this primary obligation.

From this, there emerges a fundamentally different relationship between teachers and students than is contained in the spuriously democratic model of doing justice to the conflicting interests of the various groups in the university . This is the pattern of the Gruppenuniversität introduced by German legislators to appease the radical students in the late 1960s. In matters of science and scholarship, the only differences that are relevant are differences in the capacity to pursue, discover and understand the truth. The research group in the laboratory, the team engaged in a social science survey, the humanistic seminar are more appropriate places to practice academic equality than university senates and councils and the governing bodies of research institutes.

Equality also has a place in dealing with scientific and scholary tasks in the world-wide communities which bring together scientists and scholars of diverse nationalities and cultures. This kind of community will undoubtedly become more important in the 21th century and will require a strict

adherence to the academic ethic. It is not merely a matter of legal equality and of equality in obligations to the criteria of scientific validity; there is also an obligation to understand and respect differences in approaches and conclusions, of translating them into the terms of one's own intellectual tradition, and of developing a common language which will be faithful to the most rigorous standards of scientific and scholarly work.

The solidarity of university teachers is the medium in which the academic ethic flourished and it determines the intellectual and spiritual quality of a university. The shared responsibility of university teachers for the discernment and cultivation of capacities to do scientific and scholarly work has, ever since its beginnings, been the foundation of the corporate character of the university. It has fostered the formation and sustained the effectiveness of the academic ethic and it has protected it while adapting the profession itself to new demands. If the university is turned into a guild-like institution for the defense of the professional and material interests of university teachers, then the university loses its intellectual quality and the strength to maintain its independence against political attacks and bureaucratic intrusions. Where universities were distinguished by the unity, firmness and collegial responsibility of their teachers for the well-being of the university, there they were able to withstand the tribulations of the students' agitation of the 1960s.

The most alert and sensitive awareness of collective responsibility must be focused on the arrangement of the courses of study within a discipline and on the appointment of teachers. These are not to be compared with an electoral procedure by which the members of a society for a limited time transfer to representatives their powers of governing. The assessment of the qualifications for an academic degree or for an academic appointment can be performed only by those who have the requisite knowledge; it must be done by peers. The report on The Criteria of Academic Appointment issued at the University of Chicago in 1970 contains all the essential analysis necessary for a comprehensive consideration of this responsibility.*

Collegial responsibility for the appointment of teachers entails the assessment not only of research and teaching which is necessary for coming to an agreed decision regarding any appointment, but also the assessment of the contribution which the university teacher must make to the community of teachers and students through his role in academic self-government, through informal conversations, through the critical reading of manuscripts of colleagues and pupils as well as through intellectual contacts beyond the boundaries of his own discipline and beyond those of his own university.

6: The Academic Ethic beyond the University

The freedom of research and teaching imposes on the university teacher the obligation of impartiality in his

scientific and scholarly activity. The freedom of research and of teaching which is legally guaranteed in some societies and which is tacitly assumed in others, entails the ethical obligation of the university teacher to protect research and teaching from contamination by external influence and from the partisanship and egotism which are incompatible with intellectual integrity. The espousal of particular ideological and political programmes has no place in the university. The university teacher is certainly not a political eunuch; he is just as responsible for the common good as any other citizen. In his professional activity in research and teaching however, he must nevertheless make every attempt to subject his own political view to the same rigorous criticism that he should apply in his scientific work.

The civic role of the university teacher requires a high degree of intellectual integrity. It requires that he speaks with the authority of scientific or scholarly knowledge only about the things which he has studied in his own or closely related fields and that he does not suppress evidence which would tell against his own view. Even, where, as in legal proceedings in court, he acts as a witness for one side or the other, the academic ethic places him under the obligatiopn to tell the truth and to argue in a fair and precise manner.

<u>The Extra-Scientific Obligations of the Academic Scientist</u>: The university teacher is not absolutely free in his research and teaching. He is bound by ethical responsibility to his fellow-human beings and toward the

natural environment. The promethean penetration of scientific research into the mysteries of life and the cosmos has placed the problem of the responsibility of university teachers for the repercussions of their research at the centre of public discussion. This problem will not become less urgent in the future. The history of universities has shown that the freedom of research and teaching can only temporarily be suppressed by external authorities. In the final analysis, the abuse and misuse of that freedom can be curbed only from within the academic profession itself. This is ethically obligatory as well as prudent. Strict adherence to the academic ethic is, with few qualifications, the best protection of academic freedom.

The university teacher cannot foresee either all the results of this research or all the repercussions of his discoveries and their application. If he could so, he really would not be doing important scientific or scholarly research which is the study of the unknown and hence of the unforeseeable. Nevertheless, thanks to his freedom of research, he is not less but rather more under the obligation to take into acount the ethical values of human dignity, freedom and responsibility for the future of the human race and its environment than is a person without his systematic knowledge.

Respect for the freedom of the individual, who must never be made a means for the ends of other persons, legitimates and at the same time limits the ethical responsibility of the

university teacher for the results of his own scientific or scholarly activity. On the one side, he must, in consultation with competent colleagues, forebear from doing research which will infringe on fundamental values; indeed, he must oppose such research. On the other side, respect for the freedom of the individual excludes the university from assuming the role of the ethical custodian of society. Respect for the dignity of other individuals entail respect for their own responsibility. Scientists should not be the only bearers of responsibility in their society. They share this responsibility with other groups and institutions in society. It would be arrogant for them to claim to be the exclusive authority to tell society what is good for it or to claim for themselves the responsibility for running the society.

The university teacher is neither a saint nor a magician. If he met all of the above-mentiond moral and professional expectations - and other left unmentioned- he would be a saint. Already Abelard (1079-1142/4) confessed that only pecuniae et laudis cupiditas, greed and desire for fame, led him to become a teacher. The changes in the university as an institution since Abelard's time have not changed this situation. It is true that the university is in part legitimated by the belief that scientific and scholarly knowledge is a divine gift or - in more secular language - a public good. It is consistent with this that, in general, professors should be less interested in the economic benefits for themselves arising from their own activities than is the

case in comparable professions. Nevertheless, the university, in the past, as in the present, offers numerous instances of a purely economic utilisation of academic knowledge at the cost of economically less profitable tasks in research and teaching. This will be no different in the future.

At the same time the expectations directed at university teachers become more demanding with the increasing extent to which the lives of individuals and of mankind as a whole are influenced and even determined by scientific discoveries. The demands and the prospects of profit which they offer will place a strain on the academic ethic. These expectations are not only assertions which postulate certain moral standards; they can also arouse certain moral weaknesses which are not lacking among university teachers. It is thus the conduct of university teachers in their professional roles that is at issue here.

University teachers were sometimes referred to, thirty years ago, as court fools who disclose inconvenient truths to the existing powers. This was an exaggeration. Since then, university teachers have sometimes been conceived of, with at least equal exaggeration, as medicine men, who are in a position to cure every individual and collective ailment if they would correctly apply the resources which are made available to them. University teachers are not wholly innocent of contributing to such excessive and unrealistic expectations, since they often arouse unfulfillable hopes about the benefits to flow from their research projects, or

sometimes, as experts outside the university, they allow the impresssion to arise about the ease of application of the results of scientific research.

The permeation of life by science, the part played in this process by the academically educated population, and the expectations directed towards university teachers and the university as a whole are all likely to increase in the next century. There can be little doubt that the university teachers and the universities of the 21st century will attempt as best they can to satisfy these diverse axpectations. Some of the achievements which will be expected will be forthcoming, for example the demand for the provision of academic qualifications for more young persons, is very likely to be fulfilled, at least quantitatively. The demand for research which will improve health is also likely to be fulfilled - genuinely and not spuriously fulfilled - by biomedical research much of which will be done in universities and practically all of which will be carried out by persons trained in universities to do scientific research. This does not mean that all demands will be fulfilled because it is the nature of demands never to be wholly satiated.

Demands for the improvement of the commercial and industrial competitiveness might not be satisfied in any particular country. In this respect, scientists of various countries will be competing with each other not for the achievement of a common goal or ideal which is the improvement of health everywhere but rather competing to be first on

behalf of their own respective countries which are in economic competition with other countries for larger shares of the world market for goods and services.

And there will be some demands which in the nature of things scientific and scholarly research cannot satisfy. Nevertheless all these demands and the attempts to satisfy them will affect universities profoundly. They will make them businesslike, less reposed and contemplative, more engaged in active relationship with the outside world. It will be more difficult for their members to concentrate their minds on fundamental questions and to proceed at a pace which is in accordance with the difficulties and engagingness of the subjects they study and their own inner dispositions. Such concentration of the mind -concentration on its objects by the concentration of the mind- is what has made the universities what they have become and what has given rest to the expectations which are being and will be directed towards them.

I return to the problem with which I began. There are two major tasks of universities - one is the service of the intellect, the other the service of society. It is difficult to keep these two tasks in equipoise. The problems of the 21th century will demand more attention to the second of the two major tasks. But if the first is neglected the university will cease to be a university and the capacity to deal with the second task will be very much hampered and perhaps in the end nullified.

Can the first task be attended to while the second task requires so much attention? My answer is that both tasks can be attended to but that will depend on the strength of the academic ethic.

7: The Task of the university in Humanistic Education

We began with the proposition that the university is the driving force and the consequence of the process ot rationalization which began in the first centuries of the second millenium of our era in Europa and which will have embraced the whole world by the 21st century. Rational symbols like money and writing -in word and numeral- will become even more abstract as forms for obtaining, developing and applying information for the purpose of satisfying economic, political and cultural demands. This will isolate and remove the individual even more than in the past from his primordial groups and in his traditional value order. The striving for scientific and scholarly knowledge does not make the development of the personality any easier, rather it makes it more difficult.

On the other side the employers of university graduates increasingly expect of the universities that they will not only produce large numbers of well-trained experts but that they will supply them with persons so educated that they will be able so see in the connections, conditions, and consequences of their scientifically rationalised activities the human values which will bind them together into

communitites with a normative force. This demand for well-rounded personalities will undoubtedly become one of the main challenges to the modern university in transition.

As I tried to show in my paper for the XVIII[th] ICUS Conference[3] the essential feature of humanistic education is to use the mastery of writing in word and numeral not only for the attainment of particular ends but to fit it into a social pattern, which as a binding normative community enables human beings to use their capacity to create meaningful images with the aid of speech, to conceive values and to infuse the dialogic form of life into the heart and substance of social conduct.

The permeation of the world by scientific knowledge rests essentially on the adoption and further development of universal methods of the rational explanation of the world. This is an achievement of the university. Its abstract cognitive substance can be appreciated without knowledge of its origins and its founders. Its substantive meaning however can be apprehended only with the literary testimonials of its tradition and influence. Only in that way can its substantive meaning be effective in the formation of a person.

Therefore humanistic education in the universities will require the dialogue with authors, who have infused their meaning, for better or for the worse, into the symbolic forms which have determined much of the substance of science and have given it its meaning. The classics of the various high cultures are amongst the partners of this humanistic dialogue

but the writings belonging to the Western tradition must form its core; it is in them that the intellectual, moral and professional values of the university have found their original expression.

Notes

1 The historical examples are taken from my contributions to: A History of the University in Europe (General editor W. Rüegg), vol. I: The Middle Ages (ed. by H. De Ridder-Symoens), Cambridge University Press, 1991

2 "The Criteria of Academic Appointment". Reports and Documents, Minerva, IX (April 1971), pp. 272-290.

3 "Nationalism and Internationalism: A Need for Balanced Identities", International Journal on the Unity of the Sciences, vol. 4, no. 4 (Winter 1991), pp. 1-13.